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AUG 26 2010

LOUDOUN COUNTY
DEPARTMENT OF PLANNING

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August 26, 2010

Via Hand Delivery

Jane McCarter
Project Manager
Loudoun County Department of Planning
Land Use Review
1 Harrison Street, S.E., 3rd Floor
Leesburg, Virginia 20177

Re: Loudoun Water/Luck Stone ZMAP 2009-0004

Dear Ms. McCarter:

The purpose of this letter is to respond to agency second referral comments for the above referenced application. For your convenience, each of the staff comments are stated below and the Applicants' responses follow in bold.

**LOUDOUN COUNTY DEPARTMENT OF PLANNING-COMMUNITY PLANNING:
COMMENTS PERTAINING ZMAP 2009-0004 (PAT GIGLIO, 7/12/2010)**

1. Staff finds that the proposed rezoning of the subject site for use as a quarry and water treatment facility conforms to the general land use, mineral extractive and public facilities policies of the Revised General Plan. Staff continues to recommend that proffers be developed to limit the number of uses provided on the subject site within the MR-HI (Mineral Resource-Heavy Industry) zoning district to only "stone quarrying" and "water treatment plant" to ensure compatibility with the surrounding area and consistency with Plan policies. The proposal to permit an "asphalt mixing plant" and/or "concrete mixing plant" as an accessory use on the subject site in the future is not supported by Plan policies.

Applicant Response: The Applicants have provided a revised proffer commitment which speaks to uses being sought for the Subject Property [see proposed Proffer I.1.].

2. Staff defers to the Department of Building and Development Environmental Review team (ERT) for further technical review of those outstanding issues related to mitigation of impacts to jurisdictional wetlands and utilization of appropriate stormwater management techniques on the subject site.

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Applicant Response: Acknowledged. Jurisdictional wetlands impacted during development will be mitigated in accordance with current compensatory mitigation rules as approved by the US Army Corps of Engineers.

3. Staff recognizes that the reservation of up to 70% open space in association with an operating quarry may be unrealistic and counter to the goals of the mineral extractive policies, however a unique opportunity exists to develop a significant open space amenity on the subject site following cessation of use which will fulfill the open space policies of the Plan. Staff recommends that the applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use.

Applicant Response: With regard to the area proposed for quarrying activities pursuant to SPEX 2009-0027, the response to this comment is more discussed in Luck Stone's response letter.

With regard to the 50-acre portion of the site associated with the water treatment plant, a minimum of 70% open space is provided.

4. Staff recommends that the Applicant meet with County staff prior to the development and submission of the concept reclamation plan to discuss near-term and long-term opportunities for achieving and maintaining open space on the subject site.

Applicant Response: This comment relates to ZMAP 2009-0003 the response to which is provided by Luck Stone Quarry in their response dated August 26, 2010.

LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT – ZONING ADMINISTRATION; COMMENTS PERTAINING TO ZMAP 2009-0004 (Cindy Lintz 7/7/2010)

Issues

1. Sections 3-1001 & 3-1002. The MR-HI district permits uses only to the extent they are compatible with resource extraction and contemplated as such in the Comprehensive Plan. Additionally, the Transition Policy Area discusses the importance of extractive industries and the water supply systems, but does not speak to all of the uses permitted in the MR-HI zoning district. On the concept

development plan (sheet 5), the MR-HI area is labeled "MR-HI Uses." Given the policies of the General Plan, the road access proposed, and that this is land currently in the transition zone being transferred to an industrial intensive zone; staff suggests limiting the list through proffers of permitted and Special Exception MR-HI uses in order to prohibit those that would *not* be compatible with the transitional zone. Examples of such uses that would require a more intensive transportation and land use include: Warehousing facility; Manufacture, processing, fabrication and/or assembly, distribution of products; motor vehicle storage and impoundment; storage of empty solid waste vehicles and containers, etc.

Applicant Response: The Applicants have provided a revised proffer commitment which speaks to uses being sought for the Subject Property [see proposed Proffer I.1.].

Plat

1. Sheet 1, General Note #1, fourth line, BLAD needs the "D".

Applicant Response: Spelling was corrected on Sheet 1, General Note #1.

2. Sheet 1, General Note #1, please insert "MR-HI" before the words "rezoning application is 148.80 acres."

Applicant Response: Correction to Sheet 1, General Note #1 was completed as requested.

3. Sheet 1, General Note #10, since this application no longer includes the PD-GI portion, remove reference to 4-607(B).

Applicant Response: Reference to PD-GI District was removed.

4. Sheet 1, General Note #15 separate the Quarry Notification and Limestone Overlay District (LOD) notes. Note: the Quarry Notification note should be updated to include SPEX 2010-0013 being proposed. Also, the parcel does not fall within the limits of the LOD.

Applicant Response: General Note #15 on Sheet 1 has been corrected and a new note #21 has been added.

5. Sheet 2 and other sheets where applicable, update neighboring property data. County Records shows MCPI #153-37-0418 is owned by Purnima Sareen, and MCPI # 153-27-7697 is zoned PD-IP & PD-OP.

Applicant Response: Surrounding property information has been updated.

6. Sheet 3, along the western boundary, show the 200' structure setback per Section 3-1007(E)(3).

Applicant Response: The 200' setback has been added.

7. Sheet 3, remove the word "parent" from "parent parcel". Similar to Sheet 2, remove that the proposed zone is PD-GI. Just list what is proposed for this application.

Applicant Response: Requested revisions to Sheet 3 have been made.

8. Sheet 4, under Section 3-1002, remove "(A)" and "(B)" since the ordinance does not reference those numbers.

Applicant Response: Zoning Ordinance reference has been corrected.

9. Sheet 4, under Section 5-621 (B) and 5-1406 note that a modification is being requested with SPEX 2009-0021, SPMI 2009-0006.

Applicant Response: The request note has been added to Sheet 4.

Statement of Justification

1. Sheet 2, update Table 1. The proposed tunnel application is SPEX 2010-0013

Applicant Response: Table 1 on Page 2 has been updated to add the correct tunnel application number.

2. Sheet 2, update Table 1: Companion Land use Applications with ZMAP-2009-0004. Remove CMPT 2009-0007 and SPMI-2009-0006 from the Proposed Quarry Use.

Applicant Response: Table 1 on Page 2 has also been revised to remove references to the commission permit and minor special exception.

Draft Proffer Statement

1. Throughout the proffer statement, staff suggests renaming "Concept Plan" to "Concept Development Plan" to match the plat.

Applicant Response: Revised as suggested.

2. First page, first paragraph, 10th line, staff suggests removing the word "Rezoning/Concept Plan" and inserting "as shown on the plan set (identified below),"...

Applicant Response: Revised as suggested.

3. First page, first paragraph, last sentence, staff suggests removing this sentence. "There shall be modifications allowed to the physical design and layout of the quarry and related uses to accommodate environment conditions and good engineering and planning considerations.

Applicant Response: This language has been revised to better reflect the intent of substantial conformance. It is now the second to last sentence.

4. First page, under 1 Concept Development Plan, second sentence, staff suggests changing the sentence to, "... with the plan set titled "Rezoning Loudoun Water and Luck Stone Parcel A (Formerly Parcel 15)"... dated April, 2009, and revised through May 5, 2010, prepared by Urban Ltd. And containing Sheets 1 through 9 and shall be..."

Applicant Response: Requested modification will be made except that the revision date will reflect current revisions as of August 26, 2010.

5. Sheet 2, first paragraph, staff suggests deleting the last two sentences, "The requested MR-HI special Exception uses of Stone Quarrying.... In the area shown as ___ on the Concept Plan." This would be more appropriate as a Special Exception condition.

Applicant Response: Revised as suggested.

6. Sheet 2, #2 No Build Buffer first sentence, staff suggests inserting "of sheet 5 of 9 behind "Concept Development Plan.".

Applicant Response: Revised as suggested.

7. Sheet 2 under 4 "Restricted use of Route 653", staff suggests rewording the title to include both Gant Lane (Rt. 652) & Cochran Mill Road (Rt 653).

Applicant Response: Proffer II.4. as referenced in Comment #7, above, has been deleted. Luck Stone will agree to the same restrictions outlined in this proffer as a special exception condition pursuant to SPEX 2009-0027. See comment 10.

8. Sheet 2, second sentence, staff suggests inserting both the name of the road and the route number for both roads, "Gant Lane (Rt. 652) & Cochran Mill Road (Rt 653)".

Applicant Response: Proffer II.4. has been deleted. Gant Lane and its route numbers have been identified in the current Proffer II.4.

9. Sheet 2, under 4: Restricted Use of Route 653, staff suggests inserting SPEX 2010-0013 in the last line.

Applicant Response: Proffer II.4. as referenced in Comment #9, above, has been deleted. Luck Stone will agree to the same restrictions outlined in this proffer as a special exception condition pursuant to SPEX 2009-0027. See comment 10.

10. Sheet 2 regarding proffer #4, pursuant to #18 of SPEX 1999-0006, Luck Stone previously agreed to file a SPEX application "for reconsideration of this development condition prohibition the transportation of quarried rock off-site via State Route 653...". You have offered to proffer the same in this proffer #4. If you choose to include this proffer you will need a ZCPA to amend this restriction (versus a SPEX if it is filed as a SPEX condition).

Applicant Response: Proffer II.4. has been deleted. Luck Stone will agree to the same restrictions outlined in this proffer as a special exception condition pursuant to SPEX 2009-0027.

LOUDOUN COUNTY OFFICE OF TRANSPORTATION SERVICES; COMMENTS PERTAINING TO ZMAP 2009-0003, 2009-0004, SPEX 2009-0027 and SPEX 2010-0013 (GEORGE PHILLIPS 7/22/2010)

1. **Initial Staff Comments (First Referral January 27, 2010):** Clarification is needed regarding information in the applicant's traffic statement. First, in the trip generation table (*Table 1*), only the P.M. peak hour data was provided. Please provide the A.M. peak hour data for the quarry and clarify how the peak hour LOS was calculated. Second, it needs to be clarified how the existing peak hour count data provided in *Tables 3 and 4* relate to the trip generation table (*Table 1*). The numbers appear to be different. Third, *Table 3* includes P.M. peak hour count data for Luck Lane but does not provide the peak hour count data for Jackpit Lane and Builders Lane/Belmont Station Drive.

Current Issue Status: The Applicant's traffic statement now includes the trip generation in the AM peak period traffic for the Luck Stone quarry in *Tables 2 and 3*, along with information as to how these figures were calculated. In addition, *Table 8* shows the corrected turns and the peak hour counts for Jackpit Lane and Builders Lane. Issue resolved.

Applicant Response: This comment relates to ZMAP 2009-0003 the response to which is provided by Luck Stone Quarry in their response dated August 26, 2010.

2. **Initial Staff Comments (First Referral January 27, 2010):** One page 2 of the applicant's traffic statement, it is noted that, for quarry uses on the parcels west of Goose Creek which are the focus of these applications, Luck Stone will transport rock material across Goose Creek on-site to the east side of Goose Creek for processing at the existing facility adjacent to Belmont Ridge Road (Route 659). No truck traffic for rock extraction operations is proposed via Cochran Mill Road (Route 653). Under the proposed special exception, the applicant proposes to construct a tunnel below the existing grade of Goose Creek rather than the approved conveyor belt bridge over Goose Creek (see *Attachment 4* in the first OTS referral). Please clarify that all employees and equipment accessing the parcels west of Goose Creek will not utilize Cochran Mill Road (Route 653) and Gant Lane (Route 652) and access exclusively via Belmont Ridge Road. Given the condition of Cochran Mill Road (Route 653) and Gant Lane (Route 652), OTS recommends that all vehicle access for the proposed quarry uses be via Belmont Ridge Road (Route 659) and stipulated in the rezoning proffers and/or Special Exception Conditions. Also, the specific design of the proposed underground tunnel connection needs to be better understood, including its width and specific construction standards being applied.

Current Issue Status: The Applicant has adequately clarified that the proposed private street entrance on Cochran Mill Road (Route 653) will not be used for transporting quarried rock. The entrance will provide maintenance and employee access for Luck Stone as well as the proposed Water Treatment Plant and the amount of site traffic will be relatively low. OTS believes

that the new road will provide improved access to the site by avoiding the existing substandard Gant Lane (Route 652) bridge crossing over Sycolin Creek. Please note, however, that the proposed private road with entrances onto Cochran Mill Road (Route 653) and Gant Lane (Route 652) will require review and approval by the Department of Building and Development and VDOT and must meet applicable standards; further discussion of the design of the proposed road with these agencies is recommended by OTS. As noted in the OTS comments on the Water Treatment Plant (dated June 29, 2010), this road is recommended to be completed in time to allow for construction access to the water treatment plant.

Applicant Response: It is anticipated that the new private road crossing of Sycolin Creek will be completed upon occupancy of the water treatment plant based on current construction schedules for the plant and Luck Stone's access needs relative to future mining operations. It is acknowledged that a VDOT entrance permit will be necessary for the connection to Gant Lane.

The issue of construction traffic associated with the Water Treatment Plant utilizing Gant Lane has been discussed with VDOT subsequent to this referral comment. The Gant Lane culvert crossing of Sycolin Creek is 14 feet wide and consists of a single, standard 12 foot lane. The crossing was inspected as recently as 2009 and it received an acceptable rating. No weight limits have been posted at the crossing. While the crossing is a one-lane structure, its width is considered satisfactory for construction vehicles destined for the proposed water treatment plant. VDOT has not identified an issue with the crossing. If VDOT deems necessary, these considerations can be addressed at the time of application for the entrance permit. In light of the one-lane condition of the crossing, the Applicant will agree that a traffic control plan will be in place to manage traffic flow along Gant Lane when construction traffic to the water treatment plant site is anticipated.

3. **Initial Staff Comments (First Referral January 27, 2010):** On page 6 of the traffic statement, it is noted that the installation of a traffic signal at the Belmont Ridge Road (Route 659)/Luck Lane intersection will improve the Level-of-Service to LOS D but that it is not warranted based on the Manual on Uniform Traffic Control Devices (MUTCD) warrants. The applicant needs to provide the MUTCD warrant findings. Please note that the conditions from SPEX 1990-0019 (Condition #1) call for a signal contribution when warranted. In addition, CTP Policy states that LOS D or better be maintained. Further discussion is needed as to how this inadequate LOS can be improved.

Current Issue Status: The applicant has adequately documented that peak hour warrants for a traffic signal are not met. However, no recommendations have been made which address the side street deficiencies (below LOS D) for left-turning site traffic onto northbound Route 659. In addition, OTS continues to recommend that the Applicant provide turn lanes on Route 659 into the site entrance at Luck Lane, subject to VDOT review and approval. See also Comment #4 below.

Applicant Response: This comment relates to ZMAP 2009-0003 the response to which is provided by Luck Stone Quarry in their response dated August 26, 2010.

4. **Initial Staff Comments (First Referral January 27, 2010):** While a left-turn lane is warranted on northbound Belmont Ridge Road (Route 659) onto Luck Lane, the applicant notes that it is not recommended because the proposed uses are the same as the existing condition and that Belmont Ridge Road (Route 659) is programmed for realignment. Please note that the conditions from SPEX 1990-0019 (Condition #2) call for the installation of turn lanes at the site entrance in coordination with the "planned relocation and reconstruction of Route 659". However, Belmont Ridge Road (Route 659) is not anticipated to be improved in the near future. As a two-lane facility without turn lanes, the existing traffic accessing the quarry creates friction on Belmont Ridge Road (Route 659) which impedes through traffic flow. In addition, the potential for rear-end collisions is increased. The CTP calls for turn lanes at all intersections on Route 659. OTS recommends that right- and left-turn lanes be provided by the applicant on Route 659 at Luck Lane which meet VDOT standards.

Current Issue Status: OTS understands that the previous conditions of approval for Luck Stone under SPEX 1990-0019 reference the provision of turn lanes only as part of the Route 659 widening. However, as previously noted, Route 659 is not anticipated to be widened in the near future, and the CTP calls for turn lanes at all intersections on Route 659. Therefore, OTS continues to recommend that right- and left-turn lanes be provided by the Applicant on Route 659 at Luck Lane subject to VDOT review and approval.

Applicant Response: This comment relates to ZMAP 2009-0003 the response to which is provided by Luck Stone Quarry in their response dated August 26, 2010.

5. Please confirm that the 35-foot ROW dedication and the provision of associated easements proffered with ZMAP 1999-0004 along the site's Cochran Mill Road (Route 653) frontage carry forward with the current applications.

Applicant Response: This comment relates to ZMAP 2009-0003 the response to which is provided by Luck Stone Quarry in their response dated August 26, 2010.

6. New Comment-SPEX 2010-0013 (Tunnel): OTS defers to the Department of Building & Development regarding technical review of the proposed tunnel under Goose Creek. OTS has no further comments on this matter.

Applicant Response: This comment relates to ZMAP 2009-0003 the response to which is provided by Luck Stone Quarry in their response dated August 26, 2010.

**LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT –
ENVIRONMENTAL REVIEW TEAM; COMMENTS PERTAINING TO ZMAP 2009-
0003, ZMAP 2009-0004, SPEX 2009-0027, SPEX 2009-0021, SPEX 2010-0013, SPMI
2009-0006 and CMPT 2009-0007 (WILLIAM MARSH, 7/12/2010)**

General Comments

1. Staff recommends collaboration with Loudoun Water, Luck Stone, Green Energy Partners, and to the Town of Leesburg to coordinate location of utility lines supporting the Loudoun Water project and any extension from the Town of Leesburg waste water facility that is related to a power plant application. Locating any proposed reclaimed water utility along the proposed road connecting Cochran Mill Road and Gant Lane may be an option worth considering. County staff is available to facilitate a joint meeting of all parties if requested.

Applicant Response: To the extent possible, Loudoun Water has co-located the raw water line easement within the electric transmission line easement in order to extend the line southward from the Potomac River. The water line, however, must change direction and veer off the easement so as to run eastward toward the Quarry A water storage facility. Loudoun Water and Luck Stone have coordinated relative to the location of utility lines supporting the Loudoun Water project and will continue to do so. For instance, the raw waterline between Quarry A and the proposed water treatment plant will be extended through the area to be cleared in conjunction with proposed quarrying operations, outside of the Plan recommended 300 foot no-build buffer. Loudoun Water and Luck

Stone anticipate that there will be other opportunities to co-locate quarry-related activities with other utilities that must be extended to the water treatment plant.

Loudoun Water and the Town of Leesburg's Department of Utilities have an ongoing practice of cooperation and collaboration, and this has continued with the Central Water Supply Program process. Loudoun Water is not aware of specific Town plans to extend reclaimed water to the recently approved power plant nor is it aware of the power plant's development schedule. Loudoun Water is open to future collaboration that would assist the Town in this regard, consistent with the schedule that Loudoun Water has already established for construction of the water treatment plant.

2. The long term, significant net loss of green infrastructure due to both applications is an unresolved concern. Neither applicant has committed to any reforestation or other habitat enhancement to compensate for lost forest canopy and disturbed or fragmented habitat, beyond meeting minimum requirements for federal and state permits

Applicant Response: For the 50 acres associated with the proposed water treatment plant, the facility was sited on the property in such a way as to allow substantial preservation of land and vegetation along Goose Creek. Loudoun Water has committed to the 300 foot no-build area in conjunction with the rezoning application and, in conjunction with the companion water treatment plant special exception request, has committed to expanding that buffer an additional 100 to 400 feet beyond the Comprehensive Plan recommended 300-foot buffer along Goose Creek. This will result in is a substantial tree save area. A commitment to revegetation and reforestation in specific areas of the property is also being made in conjunction with the companion water treatment plant special exception application.

With respect to the portion of ZMAP 2009-0004 to be developed with the quarry, this area is directly related to the rezoning request adjacent to the north (ZMAP 2009-0003) and as well as being a part of the SPEX for the quarry operation, SPEX 2009-0027. In conjunction with those applications, Luck Stone has committed to reforestation following cessation of mineral extraction activities. From a policy interpretation perspective, the plain meaning of Chapter 5 of the Revised General Plan categorizes "Mineral Resource Extraction Activities" as a "Geologic and Soil Resource" of the County's

“Group 1: Natural Resource Assets,” which is specifically defined as “Green Infrastructure.” The Applicants assert that this application’s implementation of the Revised General Plan’s Green Infrastructure policies cannot be interpreted as generating a significant loss of Green Infrastructure.

Second, as stated, Luck Stone has committed to significant reforestation of the Property following cessation of mineral extraction activities as noted with the Reclamation Plan narrative and Sheet 7 of the Special Exception Plat associated with SPEX 2009-0027. This reforestation and future lake use is also shown on the previously-provided “Green Infrastructure Plan” on Sheet 8 of the Special Exception Plat associated with SPEX 2009-0027, which depicts proposed open space and tree save areas on the Subject Property.

While there may be loss of tree canopy in the short term, the proposed quarry use will result in significant reforestation at the conclusion of quarrying activities on the Property. Luck Stone has committed to the provision of a minimum of 70 percent open space for the Property following cessation of the quarry use. Following cessation of mineral extraction activities, the quarry portion of the Property, together with the other quarry property to the north is currently envisioned to be permanently preserved either as private or public open space uses as forest and a body of water/water impoundment/water storage.

The resulting tree canopy and lake comprise an open space benefit in excess of the current site conditions, much of which are devoid of tree canopy, are used for agriculture, and have, until recently been used for outdoor recreation purposes.

SPEX-2009-0027 and SPEX-2010-0013 Luckstone Quarry Expansion and Tunnel

Comments 3 through 6 do not pertain to the Loudoun Water applications.

ZMAP-2009-0003, LuckStone and ZMAP 2009-0004 Loudoun Water/Luckstone

7. Staff encourages both applicants to consider habitat enhancement within lightly forested areas of the Sycolin Creek major floodplain located between Gant Lane and the Washington and Old Dominion trail crossing. As previously noted, staff commends Luck Stone for plans to restore the Sycolin Creek channel and overbank adjacent to the trail crossing. Implementing this recommendation would help address general comment 2.

Applicant Response: This comment relates to ZMAP 2009-0003 the response to which is provided by Luck Stone Quarry in their response dated August 26, 2010.

**LOUDOUN COUNTY PARKS, RECREATION AND COMMUNITY SERVICES:
COMMENTS PERTAINING TO ZMAP 2009-0003 & ZMAP 2009-0004 (BRIAN
FULLER, 10/20/2009)**

1. PRCS is developing a system of interconnected linear parks along the County's Stream Valley Corridors. This is consistent with the Greenways and Trail Policies of the Revised General Plan, Policy 1 (p. 5-39): *"Greenways include areas along rivers and streams that are often ideal for trails"*. Policy 4 (p. 5-40): *"The County will seek through purchase, proffer, density transfer, donation or open-space easement, the preservation of greenways and the development of trails"*. Parks, Recreation and Community Services Policies, Policy 3 (p. 3-15): *"The County encourages the contiguous development of regional linear parks, trail, and natural open space corridors to provide pedestrian links and preserve environmental and aesthetic resources."* In previous verbal discussions, Luck Stone Corporation has been willing to provide trail connections along Goose Creek, and Staff hopes this proposal will not reverse Luck Stone's willingness to provide the trail section.

As a Condition of Approval, PRCS requests that the Applicant consider dedicating the proposed area for the "300-foot Permanent Conservation Easement" to the County for the purposes of a linear park along Goose Creek. This project property is vital for extending a trail along Goose Creek to connect with established portions of the Potomac Heritage National Scenic Trail and its trailhead at Keep Loudoun Beautiful Park downstream.

Should the Applicant not be willing to dedicate the property, PRCS requests a condition that the Applicant construct a 4-foot wide natural trail within a 30-foot wide public access easement along Goose Creek within the 300-foot buffer, to be

field located by PRCS Staff. This would be consistent with previously-approved applications along Goose Creek, such as Play to Win Sports (SPEX 2007-0056).

Applicant Response: *The applicants commit to the Plan recommended 300-foot no-build buffer area along the Application Property's frontage with Goose Creek.*

Issue Status: *Unresolved. While Staff appreciates the Applicant's commitment to "a future trail within the buffer parallel to Goose Creek" within Proffer I.2, Staff requests that the additional following language be added to the proffer: "The future trail will be dedicated within a public access easement at the request of the County to serve as a connection to the Potomac Heritage National Scenic Trail. The ultimate location of the trail centerline will be field located by Department of Parks, Recreation and Community Services Staff." As previously stated by Staff, this trail will be a vital connection to the Potomac Heritage National Scenic Trail, as well as to a future trail section to be provided south (upstream) by Loudoun Water along their proposed water treatment plant.*

Applicant Response: **As noted in the response letter associated with SPEX 2009-0021 dated May 5, 2010, the Applicant will agree to a special exception condition to provide a public access easement within 300 feet of Goose Creek once the same has been established by others between the property and the WO&D Trail as long as such an easement will not conflict with the finished water line or easements related to the Dulles Greenway.**

2. Staff requests the opportunity to explore potential recreational opportunities, within and around the quarry site with the Applicant, before and after quarry construction, such as non-motorized boating, fishing, hiking, and picnicking.

Applicant Response: *Luck Stone is amenable to exploring potential recreational opportunities within and around the quarry site and appreciates staff's understanding that quarry safety during the construction and pendency of the proposed quarrying operation. Luck Stone understands Staff's desire to preserve the planned Quarry D for a future recreational amenity; this desire is consistent with the purpose of the MR-HI zoning district, which envisions the proposed quarry use as a "long term, but interim district," and recognizes that the proposed quarry can be converted "... to other compatible and beneficial uses consistent with the Comprehensive Plan." To the end, Luck Stone envisions that the quarry use will ultimately provide a public amenity once quarrying operations have ceased. However, given the extended timeframe for exhaustion of the*

planned quarry (perhaps as long as 100 years from the beginning of extraction), Luck Stone cannot commit to the creation of a public recreational amenity at this time, nor can it commit as to what recreational opportunities would be appropriate following the end of extraction activities.

Luck Stone is regulated by the Virginia Department of Mines, Minerals, and Energy ("DMME") under Chapter 16, Title 45.1, Articles 1-4 of the Code of Virginia (1950), as amended, and we have included a revised reclamation plan that meets DMME requirements. The (DMME) will require Luck Stone to follow reclamation standards as a precondition to the release of the quarry permit when mining operations have ceased, and these standards include provision for revegetation in areas that are capable of being regarded and resoiled. Revegetation will therefore be accomplished prior to implementation of the proposed water storage use.

Issue Status: Unresolved. Loudoun County Revised General Plan Mineral Resource Extraction Policy 9 (p.5-26) states that, "An application to permit the development of new quarries or the expansion of existing quarries will include a concept plan for the use of the site after extraction is complete."

PRCS understands that there is an unforeseeable end to the timeline for extraction opportunities within the proposed quarry expansion, but requests that the Applicant provide additional information behind what DMME requires for site stabilization and restoration. Furthermore, Staff supposed the proposal for the quarry to be used by Loudoun Water for future water storage, and pre-treated water storage is a very compatible use for many passive recreational opportunities, such as fishing, non-motorized boating, and diving.

Applicants' Response. With respect to the portion of ZMAP 2009-0004 to be developed with the quarry, this area is directly related to the rezoning request adjacent to the north (ZMAP 2009-0003) and as well as being a part of the SPEX for the quarry operation, SPEX 2009-0027. In conjunction with those applications, Luck Stone has committed to significant reforestation of the Property following cessation of mineral extraction activities. This reforestation and future lake use is also shown on the previously-provided "Green Infrastructure Plan" on Sheet 8 of the Special Exception Plat associated with SPEX 2009-0027, which depicts proposed open space and tree save areas on the portion of the subject property proposed for quarry use.

While there may be loss of tree canopy in the short term, the proposed quarry use will result in significant reforestation at the conclusion of quarrying activities on the Property. Luck Stone will commit to the provision of a minimum of 70 percent open space for the Subject Properties following cessation of the quarry use. Following cessation of mineral extraction activities, the Property, together with the quarry area to the north, is currently envisioned to be permanently preserved either as private or public open space uses as forest and a body of water/water impoundment/water storage.

The resulting tree canopy and lake comprise an open space benefit in excess of the current site conditions, much of which are devoid of tree canopy, are used for agriculture, and have, until recently been used for outdoor recreation purposes. Luck Stone has committed that, within five years prior to the conclusion of quarrying activities on the property, they will present a refined reclamation plan further specifying anticipated end users which may include use by the public.

This comment does not pertain to the 50-acre portion of the subject property to be developed with the water treatment plant.

**TOWN OF LEESBURG DEPARTMENT OF PLANNING AND ZONING; COMMENTS
PERTAINING TO ZMAP 2009-0004 (JAMES GRANDFIELD, 6/10/2010)**

It is noted that all of the comments included in this referral relate to ZMAP 2009-0003, Luckstone Quarry. As such, this letter will not include responses.

**GOOSE CREEK SCENIC ADVISORY COMMITTEE; COMMENTS PERTAINING TO
ZMAP 2009-0003 & 2009-2004 (HELEN CASEY, 9/10/2009)**

1. After consulting with the project representative, we have reviewed the above applications and have no significant changes in our previous comments

Applicant Response: Acknowledged.

2. We are aware of the land swap between the two companies and find that it will further enhance the protection of the 300' no build-scenic buffer along Goose

Creek. Further, the building of the tunnel will negate the need for the previously-approved bridge over the Creek

Applicant Response: Acknowledged

COMMONWEALTH OF VIRGINIA – DEPARTMENT OF CONSERVATION & RECREATION; COMMENTS PERTAINING TO ZMAP 2009-0003, ZMAP 2009-0004 (S. RENE HYPES, 10/28/2009)

DCR reiterates its October 2009 comments. According to the information currently in our files, natural heritage resources have not been documented at this location.

Applicant Response: Acknowledged.

Our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Applicant Response: Acknowledged.

Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory for these resources in the project area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

Applicant Response: Acknowledged

DCR supports at least a 300 foot no build zone for the protection of the significant Basic Oak Hickory community documented along Goose Creek as noted on page 4 of the Second Submission: Loudoun Water/Luck Stone ZMAP 2009-0004.

Applicant Response: Acknowledged.

Since it has been determined that this project or activity may impact Ginseng, a state-protected plant, VDACS will respond directly to ensure compliance with Virginia's Endangered Plant and Insect Species Act. Further correspondence regarding the potential impacts of this project or activity on state-listed plant and insect species should be directed to VDACS.

Applicant Response: Acknowledged.

DCR – Division of natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at chris.ludwig@dcr.virginia.gov or 804-371-6206 to discuss arrangements for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the USFWS.

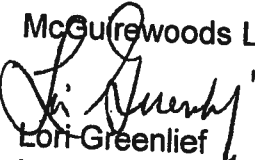
Applicant Response: Acknowledged.

Our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity. Please note Goose Creek has been designated as a scenic river in the state of Virginia. Due to this designation, DCR recommends you contact Lynn Crump of the DCR-Division of Planning and Recreation at 804-786-5054 or Lynn.Crump@dcr.virginia.gov.

Applicant Response: Acknowledged.

Sincerely,

McGuirewoods LLP


Lori Greenlief
Land Use Planner

cc: Dale C. Hammes, Loudoun Water
Tim Coughlin, Loudoun Water
Karen Arnold, Loudoun Water
Mark Peterson, Luck Stone
J. Randall Minchew, WCLEW
William J. Keefe, WCLEW
Andrew A. Painter, WCLEW

113257900.1

PROFFER STATEMENT
LOUDOUN WATER and LUCK STONE CORPORATION
ZMAP 2009-0004

May 5, 2010
August 10, 2010
August 26, 2010

Loudoun County Sanitation Authority d/b/a Loudoun Water, a Virginia body politic and corporate, Owner and Co-Applicant, together with Luck Stone Corporation, a Virginia corporation, Co-Applicant and Contract Purchaser in part, (hereinafter, the "Applicants"), of certain property described as Loudoun County Tax Map Parcel Number 61-15 (MCPI 153-35-5865), (hereinafter the "Subject Property"), hereby voluntarily proffer, pursuant to Section 15.2-2303 of the Code of Virginia (1950), as amended, and Section 6-1200 of the Revised 1993 Loudoun County Zoning Ordinance, (hereinafter referred to as "Zoning Ordinance"), as amended, that in the event the Subject Property is rezoned by the Loudoun County Board of Supervisors to the Mineral Resources-Heavy Industry ("MR-HI") Zoning District and as shown on the Plan Set (identified below), the development of the Subject Property will be in substantial conformance with the following proffered terms and conditions. Substantial conformity shall include modifications pursuant to good engineering practices and environmental conditions, in recognition that the quarry location is approximate depending on the location of existing mineral resources. A special exception request for Stone Quarrying in the MR-HI, as proposed in SPEX 2009-0027 and a special exception request for a Water Treatment Plant in the MR-HI, as proposed in SPEX 2009-0021 are being processed concurrently with this ZMAP 2009-0004.

I. LAND USE AND ENVIRONMENTAL

1. Concept Development Plan

The development of the Subject Property shall be in substantial conformance with the plan set titled "Rezoning for Loudoun Water and Luck Stone Parcel A (Formerly Parcel 15)", dated April, 2009, and revised through August 26,

2010 prepared by Urban Ltd. and containing sheets 1 through 9 and shall be in substantial conformance with the conditions set forth below.

2. Allowable Uses

The requested MR-HI by-right and special exception uses of "Agriculture, horticulture, forestry, or fishery," "Excavation, mining, dredging, stripping," "Park," "Water pumping station," "Crushing, treating, washing, and/or processing of materials, accessory to a quarry operation, when conducted on the same property," "Crushing, treating, washing, and/or processing of materials," "Utility Lines," "Sewage pumping station", "Stone Quarrying," "Water treatment plant," and "Water storage tank," including any accessory uses (which may include without limitation, generators, fuel storage tanks, water storage tanks, telecommunications towers and other uses accessory to the water treatment plant), may be located anywhere within the portion of the property labeled "Proposed MR-HI," and consistent with the Rezoning Plat and any applicable Special Exception Plat.

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3. No Build Buffer

The land area depicted on Sheets 2, 3, 5, 6, 7, 8, and 9 of 9 of the CDP, as "300' No Build Buffer per Comprehensive Plan" along Goose Creek shall be kept in open space purposes as a "no-build" buffer area. With exception of the travel ways shown on the CDP, as well as those activities necessary to the maintenance of the Goose Creek and Goose Creek Reservoir, no surface land development activities shall be permitted except for forest/tree maintenance in accordance with forestry and silviculture practices approved by the County Urban Forester and a public access easement for a future trail."

II. TRANSPORTATION

4. Gant Lane

The Applicant shall dedicate sufficient right-of-way to accommodate a turnaround at the terminus of Gant Lane (Route 652), generally as shown on the Concept Development Plan.

III. SIGNATORY AUTHORITY

The undersigned parties hereby warrant that all of the owners of a legal interest in the Property have signed this Proffer Statement, that they possess full authority to bind the Property to these conditions, and that the Proffers are entered into voluntarily.

[SIGNATURE PAGES TO FOLLOW ON NEXT PAGE]

LUCK STONE CORPORATION

**Contract Purchaser in Part of LCTM 61-15
(MCPI #153-35-5865)**

By: _____

Name: Mark Peterson

Title: Real Estate Manager

STATE OF _____

COUNTY OF _____, to wit:

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Mark Peterson, as Real Estate Manager of Luck Stone Corporation, whose name is signed to the foregoing, appeared before me and personally acknowledged the same in my jurisdiction aforesaid.

GIVEN under my hand and seal this _____ day of _____, 2010.

My Commission Expires:

Notary Public

**LOUDOUN COUNTY SANITATION
AUTHORITY (d/b/a LOUDOUN WATER)
Fee Simple Owner of LCTM 61-15 (MCPI #153-
35-5865)**

**By: _____
Name: Dale C. Hammes
Title: General Manager**

STATE OF _____
COUNTY OF _____, to wit:

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Dale C. Hammes, General Manager of Loudoun County Sanitation Authority (d/b/a Loudoun Water), whose name is signed to the foregoing, appeared before me and personally acknowledged the same in my jurisdiction aforesaid.

GIVEN under my hand and seal this _____ day of _____, 2010.

My Commission Expires:

Notary Public

**Statement of Justification
ZMAP-2009-0004
Zoning Map Amendment Application for
Part Parcel A (formerly Parcel 15)
(Part TM 61; Part MCPI# 153-35-5865)
Loudoun Water and Luck Stone Corporation, Co-Applicants
June 1, 2009
May 5, 2010
August 26, 2010**

Summary of Project Proposal

Loudoun Water and Luck Stone Corporation are co-applicants in the subject rezoning application and are requesting that part of Parcel A (Property) comprising approximately 148.81 acres be rezoned from the TR-10 District to the MR-HI District. The Property is a vacant parcel of land located north of the Dulles Greenway and west of Goose Creek with access to Cochran Mill Road, Rt. 653 via Gant Lane, Rt. 652. The Co-Applicants propose using the Property for a quarry and a water treatment plant in accordance with two companion special exception applications that have been filed. Future quarry use of the Property will not, however, utilize Gant Lane for vehicular access.

Adjacent parcels to the north, west and south (beyond the Dulles Greenway) are vacant and zoned TR-10. Acreage that is zoned TR-10 to the northeast includes a 19.56 acre portion of Parcel A in addition to a parcel owned by the City of Fairfax. These properties and other TR-10 zoned acreage to the north are currently included in a rezoning request to the MR-HI and PD-GI Districts (ZMAP-2009-0003). The City also owns approximately 143 acres of PD-IP and PD-GI zoned land just across Goose Creek which is the site of its Goose Creek Water Treatment Plant. Other PD-IP zoned land is located south of the City's property and includes the approved Goose Creek Village development.

The Property and those surrounding it on the west side of Goose Creek are located within the Lower Sycolin Subarea of the Transition Policy area per the Loudoun County Revised General Plan. This area is seen as a unique planning area that incorporates an innovative blend of rural and suburban development features while integrating elements of the Green Infrastructure and establishing natural open spaces as a predominant visual element and enhancement to the area's river and stream corridors. Institutional uses and stone quarrying operations that are developed in accordance with Plan policies are permitted in the Transitional Policy Area. Parcels to the east, across Goose Creek, are located in the Suburban Policy Area and are planned for commercial, office, and industrial uses.

The Co-Applicants have filed separate special exception and/or commission permit applications on the Property as well as other related land use applications on nearby parcels. All applications are identified in Table 1, below, and are summarized as follows in order to provide context for the subject rezoning application:

- Loudoun Water owns the Property and has filed a companion special exception, commission permit, and minor special exception application for a water treatment plant on 50 acres of the southern portion of the Property (SPEX-2009-0021/CMPT-2009-0007/SPMI-2009-0006). Loudoun Water has received approval to use a future retired quarry owned by Luck Stone for Water Banking (SPEX-2009-0020/CMPT-2009-0006) as fully described in the Background section of this Statement.
- Luck Stone is contract purchaser for the remainder of the Parcel A, and is also seeking to rezone a 19.56 portion of the parcel and other adjacent parcels from the TR-10 District to the MR-HI and PD-GI Districts (ZMAP-2009-0003). Luck Stone Corporation has

filed a special exception application for a quarry use that will extend the limits of an adjacent approved quarry to a logical southern terminus, that being the northern boundary of the proposed water treatment plant (SPEX-2009-0027). Luck Stone has filed a second special exception application to request approval for access between quarries on either side of Goose Creek via an underground tunnel instead of a bridge over the creek.

- A boundary line adjustment is being filed concurrent with this application in order to make the boundaries of Parcel A coincide with those of the proposed water treatment plant parcel in the event that all related applications are approved.

Table 1: Companion Land Use Applications with ZMAP-2009-0004				
Application	Parcel ID	Acreage	Loudoun Water	Luck Stone
ZMAP-2009-0004 (Proposed MR-HI)	Part MCPI #153-35-5865 (Part Parcel A)	148.81 ac	Co-Applicant with Luck Stone	Co- Applicant with Loudoun Water
ZMAP-2009-0003 (Proposed MR-HI & PD-GI)	MCPI #152-36-1675 MCPI #152-25-5356 Part MCPI #153-35-5865 MCPI #151-16-0598 MCPI #152-27-4798 MCPI #152-26-8334 MCPI #152-16-8431	323.27 ac.		Applicant
SPEX-2010-0013 (Proposed Tunnel Use)	MCPI #152-39-5797 MCPI #151-37-7403	30.77 ac.		Applicant
SPEX-2009-0027 (Proposed Quarry Use)	MCPI #152-36-1675 MCPI #152-25-5356 MCPI #151-16-0598 Part MCPI #153-35-5865 MCPI #151-37-7403 MCPI #152-26-8334	321.12 ac.		Applicant
SPEX-2009-0021 CMPT-2009-0007 SPMI-2009-0006 (Proposed Water Treatment Plant Use)	Part MCPI #153-35-5865;	50 ac.	Applicant	
SPEX-2009-0020 CMPT-2009-0006 SPEX-2009-0033 SPMI-2009-0009 (Approved Water Storage Use)	Part MCPI# 114-25-6156;	34.71 ac.	Applicant	
BLAD-2009-0031	MCPI#153-35-5865 MCPI#152-25-5356		Applicant	

Background

Loudoun Water's Long-Range Planning Efforts to Satisfy Anticipated Needs for the Central Water Supply System

Loudoun Water currently provides public water to residential and non-residential customers within an area identified by Loudoun County as the Central Water Supply System (See Exhibit 1). Loudoun Water obtains 57 million gallons per day (MGD) of water to serve this area from Fairfax Water and the City of Fairfax. Loudoun County land use plans and related demographic

projections have been used by Loudoun Water to forecast that more water will be needed to meet future demand in the Central Water Supply System by 2035-2040 (total estimate needed: 90 MGD) even as efforts continue to reduce peak demands through implementation of a wise water use program and proactive demand management strategies. On December 11, 2008, the Loudoun Water Board of Directors gave approval for the proposed Potomac River Water Supply and Raw Water Storage Program ("Central Water Supply Program"), a two-phased program to meet current and projected needs for the next 30 years by withdrawing raw, non-potable water directly from the Potomac River, storing it for future use in existing quarries, and processing finished drinking water at a new water treatment facility.

Loudoun Water's Central Water Supply Program

The Loudoun Water Board of Directors' action was a culmination of years of effort that included long-range planning, alternatives analysis, negotiation between potential partners and outreach to community interests. Alternatives included increasing the amount of water purchased from Fairfax Water, and the purchase and upgrade of an existing water treatment plant owned and operated by the City of Fairfax.

Fairfax Water utilizes an integrated system to provide Loudoun Water up to 50 MGD of water from the Potomac River and the Occoquan Reservoir. This system provides a dependable source of water and was evaluated as an alternative to the proposed water storage option. However, significant costs are associated with increasing the water volume necessary to meet Loudoun County's needs and include the cost of upgrading Fairfax Water's existing intake on the Potomac River, extending an additional 35 miles of water lines through both developed and natural areas of Loudoun and Fairfax Counties (instead of the 8 miles contemplated with the proposed Central Water Supply Program) and incurring ongoing operating costs of a system that requires the pumping of water between elevations that differ by as much as 340 feet.

The City of Fairfax obtains water from the Goose Creek Reservoir and existing agreements allocate up to 7 MGD to Loudoun Water as available. Droughts in recent years have diminished stream flow in Goose Creek, however, and Loudoun Water has only been able to reliably depend upon 3 MGD from this source. While Loudoun Water has approached the City with offers to purchase and upgrade the existing water treatment plant, the City remains committed to ownership and operation of its own water treatment facility.

Loudoun Water could construct a water treatment plant on land it owns along the Potomac River, to the west of the River Creek community. However, development constraints associated with this property as well as its size (less than half the acreage of the proposed site) limits the amount of open space that can be used to augment minimum buffer requirements along the property's boundary, next to existing residential development. Moreover, the parcel is not located near current and future Loudoun Water customers who will need to be served by the expanded water supply. Nor is it located in proximity to raw water storage sites and finished water storage tanks that are part of the Central Water Supply System.

Loudoun Water's decision to build its own Potomac River water supply, to better locate its future water treatment plant near an existing/future customer base, and to utilize quarries for water storage was made in light of the factors cited above.

Components of the Central Water Supply Program

Loudoun Water's Central Water Supply Program consists of individual components: a raw water intake and pump station at the Potomac River, a water treatment plant on the Property, and raw water storage (Water Banking – see below) in one or more quarries owned by Luck Stone

Corporation that are located in between the two other components. Exhibit 2 is provided for illustrative purposes only, to portray the manner in which components of the proposed Central Water Supply Program relate to each other and to other quarry sites that may provide potential opportunities for Water Banking opportunities in the future.

Raw Water Intake and Pump Station

The Central Water Supply Program includes a water intake to be located in the Potomac River and on a 23 acre riverfront property that Loudoun Water acquired in 1993. Raw water will be pumped from the river and conveyed to the remaining components of the system. Revised General Plan policy recommends that Loudoun Water may provide its own water supply option along the Potomac River. Use of this parcel for an intake was shown on an approved concept plan associated with the River Creek rezoning (ZMAP 1989-0015), and the pump station that is part of the intake component is permitted as a by-right use per the Loudoun County Zoning Ordinance. As a result, neither a commission permit nor a special exception is required for this use. However State and Federal permits are required for the intake and other system components, and these will be obtained.

Water Banking: Raw Water Storage in Existing Quarries

Key to the Central Water Supply Program is a unique concept described as Water Banking; using retired quarries that have been fully mined for water storage. Raw, non potable water is deposited in the quarries during times when Potomac River flows are normal to high, then withdrawn in lieu of continued withdrawals from the river during times of drought or excess turbidity. In this way sufficient water can be treated to serve the demands of Central Water Supply System customers without impacts to the river or to the water supply needs of other jurisdictions.

Loudoun Water's public/private partnership and business agreements with Luck Stone are instrumental to implementing the Water Banking concept. Four quarries situated in proximity to each other as well as to Loudoun Water's proposed water treatment plant afford the opportunity to store up to eight billion gallons of water and minimize Loudoun Water's withdrawals from the Potomac during less optimal times. In this manner, Loudoun Water will be able to use quarries for a beneficial public purpose. An agreement between Loudoun Water and Luck Stone provides Loudoun Water the opportunity to use Luck's quarry located north of the W&OD Trail and east of Goose Creek ("Quarry A") for Water Banking. It is anticipated that approximately 1 billion gallons of water will be able to be stored in this quarry alone once mining operations are complete in the 2017-2020 timeframe. Loudoun Water recently received approval to use Quarry A for Water Banking (SPEX-2009-0020/CMPT-2009-0006/SPEX-2009-0033/SPMI-2009-0009).

Water Treatment Plant

The Central Water Supply Program envisions a water treatment plant being constructed on the Property in two phases. Phase I will result in the construction of a 20 MGD facility by approximately 2016 to serve the short term water needs of the Central Water Supply System. The fully expanded 40 MGD facility will provide for future needs to the 2035-2040 timeframe. Water from either the Potomac River or Water Banking site(s) will be processed into finished drinking water at the treatment facility. From there it will enter the Central Water Supply System via a finished water line that extends under Goose Creek to an existing water line along Belmont Ridge Road, Rt. 659, connecting to local water lines and to Loudoun Water's Broadlands and Brambleton water tanks located approximately 1.6 and 4 miles to the south, respectively.

Luck Stone's Long Range Planning Efforts to Retain Mining Options for Existing Mineral Resources

The Property is located in a defined belt of diabase rock, a natural mineral resource which is used as a base component for construction of roads and building foundations. The Revised General Plan recommends the protection of this resource from incompatible land uses such as residential development. The Plan recognizes that stone quarrying is an important local economic resource.

Luck Stone is proposing in a separate rezoning application that a portion of Parcel A and other nearby parcels be rezoned from Tr-10 to the MR-HI and PD-GI Districts for the purpose of extending an approved quarrying operation over those parcels and a portion of the subject Property. It is fortunate that many of the land uses in the vicinity of these Properties have been developed or zoned for compatible industrial or institutional purposes, or are visually/geographically separated from nearby land uses by geographical or manmade features such as Goose Creek (see Exhibit 3). Nevertheless, land development has been constructed, approved, and/or proposed within the vicinity of the Property that diminishes the certainty that the County's remaining high-quality diabase rock resources will be protected and utilized. Furthermore, the future Dulles Metrorail Extension project along the Dulles Greenway (scheduled to be opened in 2015) will create a powerful economic incentive for Loudoun County and will spur additional land development in the vicinity of the Property, and may further preempt the recovery of potentially valuable diabase resources.

Merely identifying and determining the value of diabase mineral resources does not necessarily ensure that Loudoun County's mineral resources will be available for recovery. Prime quarry lands must also be properly mapped to a zoning district which permits mineral extraction, and the proposed rezoning seeks to protect, conserve, and reserve—from preemptive land development—a significant amount of the remaining diabase resources of Loudoun County. Accordingly, Luck Stone is petitioning Loudoun County to use its zoning authority to protect and preserve its valuable geologic assets from future land development by rezoning the Property and those to the north to the MR-HI zoning district. Section 3-1000 *et seq.* of the Zoning Ordinance establishes the MR-HI district specifically for the purpose of protecting the County's diabase rock as a mineral resource, to provide for diabase resource extraction operations at appropriate locations, and to co-locate with quarries heavy industrial uses compatible with resource extraction.

It is also critical that the Subject Properties be granted the ability to ensure that mineral extraction can take place in a meaningful way and that potential quarry pit areas be of sufficient size to maximize resource recovery. Adequate pit width is critical to the efficient operation of transport and loading equipment as well as the proper storage and efficient removal of overburden and related debris. Quarry size also directly influences tonnage and pit depth, as well as equipment selection, operating costs relative to production life, and diabase quality relative to production life. The size, distribution, and particular shape of quarry pits can differ from one quarry location to another, depending on the geological source of the rock, the crushing equipment used, and the method used for coarse aggregate separation.

Section 3-1007(E)(1) of the Zoning Ordinance provides that "[t]he pit wall of a quarry shall be a minimum of 1,000 feet from the MR-HI district boundary," except where "...quarries are adjacent to the PD-GI or CLI district, the setback may be reduced to a minimum of 50 feet." Strict implementation of this 1,000-foot buffer requirement from the eastern and western edges of the proposed MR-HI zoning district to a future quarry limits on the Property will narrow the width of the potential quarry pit in a way that greatly reduces substantial recovery of the Property's surface minerals.

A PD-GI zoned strip of land was originally proposed as part of ZMAP-2009-0004 along the eastern border of the Property. Staff subsequently recommended that parcels owned by the City of Fairfax (MCPI #152-27-4798, 152-26-8334, and 152-16-8431) be incorporated into ZMAP-2009-0003 and/or ZMAP-2009-0004. The City's parcels have now been added to companion ZMAP-2009-0003 as has a 19.56 portion of Parcel A and rezoning of all or a portion of those properties to PD-GI is proposed in ZMAP-2009-0003 only. Rezoning of land to the PD-GI District is no longer part of ZMAP-2009-0004.

As this application is for a rezoning of the Property rather than a special exception for stone quarrying uses, Luck Stone does not foresee additional business activity or any increases in vehicle trips by virtue of approval of this ZMAP application. Luck Stone fully anticipates that its forthcoming special exception will only serve to increase the functional life of the existing Leesburg Plant operation while protecting the diabase assets with appropriate zoning entitlements. As discussed in the Transportation Analysis prepared by Patton, Harris, Rust & Associates, no increases in vehicle trips will occur by virtue of a quarry expansion.

Under Condition 18 under SPEX 1999-0006, Luck Stone is effectively permitted to ship quarried rock material only via Belmont Ridge Road, and anticipates only using Route 659 for truck access in the future. Because the output of the stone crushing operation at the Leesburg Plant (Quarries "A" and "B") will remain in its present location, even after quarrying operations begin west of Goose Creek, expansion of the existing quarry will therefore only extend the useful life of the existing quarry. There will be no increase in product output or vehicular trips using Belmont Ridge Road or any other roadway as a result of the proposed ZMAP application or upcoming special exception.

Transportation Access

Access to the portion of the Property that is associated with the proposed quarry will be provided either via Belmont Ridge Road (Route 659) or Cochran Mill Road (Route 653), both of which have direct or secondary access to Route 7 to the north and the Dulles Greenway (Route 267) to the south. Under Proffer 10 and Condition 18 of ZMAP 1999-0004 and SPEX 1999-0006, respectively, Luck Stone is prohibited from using Cochran Mill Road (Route 653) for transporting quarried rock.

The volume of quarry-related truck traffic is directly tied to market demand and, since the proposed expansion of the quarry use will not increase the intensity of crushed stone production or the sales volume, and considering that market demand will not change as a result of the approval of this application, the quarry expansion will serve only to extend the functional life of the existing Leesburg Plant quarry operation while protecting the diabase assets with appropriate zoning entitlements. Accordingly, and as discussed in the Transportation Analysis prepared by Patton, Harris, Rust & Associates, Luck Stone does not foresee additional business activity or any increases in vehicle trips by virtue of approval of ZMAP 2009-0004, ZMAP 2009-0003, or SPEX 2009-0027 over that which has been previously approved.

In conjunction with this request, Luck Stone has proposed a special exception to revise conditions 14 through 19 approved under SPEX 1990-0019 to permit a below-grade inter-quarry tunnel access road, rather than the approved conveyor/bridge, to serve as the primary connection between the approved and proposed quarries on the west side of Goose Creek and the existing Leesburg quarry and crushing operations on the east side of Goose Creek. This request was previously made in conjunction with SPEX 2009-0027; however, at the request of Staff, Luck Stone has agreed to segregate this request from the larger quarry request.

Luck Stone will utilize an existing farm lane and bridge on MCPI #151-16-0598 to begin the excavation of the inter-quarry tunnel below Goose Creek. The balance of MCPI #151-16-0598 will

remain as open space until a superseding ZCPA is approved by the Board of Supervisors, and no transportation of quarried rock will occur through the farm lane or bridge.

Notably, SPEX 1990-0019 included the approval of one access point across Sycolin Creek along Cochran Mill Road, which was contemplated to be permanently used for emergency and intermittent access by approximately 10 employees, company maintenance vehicles, and supply vendors. In recent years however, Luck Stone has evaluated the feasibility of the approved crossing in light of recent stream mitigation efforts along Sycolin Creek, engineering costs, significant topographic challenges, as well as the future needs of Luck Stone's proposed quarry expansion by virtue of this application.

In consideration of these physical and environmental factors, Luck Stone now proposes that emergency and intermittent service access for quarry related activities west of Goose Creek be provided via a private road constructed on a new alignment between Cochran Mill Road and Gant Lane. The proposed alignment will traverse the Sycolin Creek floodplain at its narrowest point. This new road, the location of which was selected to minimize disturbance of wetlands and floodplain, will provide emergency and intermittent service access for a maximum of 10 Luck Stone employees per day. As noted above, no transportation of quarried rock will occur through this access point. Luck Stone will not use any portion of Gant Lane for access. This new private road is proposed as part of Luck Stone's companion rezoning, ZMAP-2009-0003.

The traffic analysis for SPEX 1990-0019, by Callow Associates, Inc., had conservatively estimated approximately 25 A.M. and P.M. peak directional trips turning to the Luck Stone access on Route 653, to provide maintenance and employee access to the properties west of the Goose Creek. These volumes exceed the anticipated activities, and could be accommodated with proposed access improvements in coordination with Luck Stones other pending applications.

In addition to assisting Luck Stone, the new permanent road connection between Cochran Mill Road and Gant Lane will also provide improved access to the proposed water treatment plant for up to 20 Loudoun Water employees and an average of two trips per day for truck deliveries and service vehicles. The southern terminus portion of Gant Lane abuts Parcel A and will be used to provide access to the water treatment plant via a private road over the parcel.

Archeological Features

Although a number of archeological sites were recorded during the cultural resource investigations conducted on the Subject Property, only one archeological site (#44LD1324), was recommended for further study if impacts were to occur. A Phase II study conducted for the site by Thunderbird Archaeology in accordance with the 2009 DHR Guidelines for Archeological investigations indicated disturbance at the site. Additionally, the field supervisor and principal investigator utilized investigative methods that met or exceeded the Secretary of Interior's Standards. Most of the artifacts were recovered from secondary, post occupational deposits. The site is not considered to be eligible for the National Register of Historic Places and no additional archeological work is recommended. A report entitled, "Phase II Archeological Evaluation of Site 44LD1324," is included for Staff's review.

Comprehensive Plan Considerations Relative to the Proposed Rezoning; Compliance with Plan Objectives

The Property is located in the Lower Sycolin Subarea of the Transition Policy Area per the Revised General Plan and is included in the diabase map of the Toll Road Plan. The Revised General Plan acknowledges the importance of quarries as well as the need to provide adequate facilities for the provision of public water to the Central Water Supply System which serves both

the Transition Policy Area and the Suburban Policy Area of the County. Compatible institutional uses are permitted in the Transitional Policy Area where they can promote the rural character while serving the suburban population.

The proposed rezoning is in conformance with the land use policies and text as well as the land use map of the Revised General Plan. The Revised General Plan's extractive industry policies and recommendations specifically note the importance of the Leesburg Plant and advise of the need to protect the quarry from encroaching residential development. Existing quarry operations are to be promoted in the County as long as the property is well buffered from surrounding residential uses.

A. Transition Policy Area Recommendations

Chapter 8 of the Revised General Plan states that land uses in the Transition Policy Area are to achieve a visual and spatial transition between the Suburban and Rural Policy Areas of the County. The Transition Policy Area is envisioned as a unique planning area that incorporates an innovative blend of rural and suburban uses. A balance between the built and natural environments is to be achieved through the provision of open space and the implementation of the County's Green Infrastructure Policies. Natural open space is to be the predominant visual element and is to create a contiguous network of green spaces consistent with Green Infrastructure objectives. Open space is to be located so as to create and supplement a 300 foot buffer along Goose Creek.

The Transition Policy Area recommendations provide direct support for the proposed ZMAP application. These policies recognize the importance of subterranean diabase rock assets to the economic future of Loudoun County and recommend that areas that possess this resource be preserved through land acquisition and use of the zoning power of the County. Luck Stone Corporation proposes to preserve the existing diabase resources that exist on the Property and those adjacent to it through its extensive land acquisition efforts.

(1) "The County will continue to protect the extractive industry (Bull Run and Luck Stone quarries) through a Quarry Overlay District" (Page 8-2).

Compliance with Plan policies: The proposed rezoning will ensure compliance with this comprehensive planning policy by protecting the County's active quarry operations and diabase-enriched lands from incompatible uses through proper application of its zoning powers.

(2) "Luck Stone Quarry, located within the Lower Sycolin subarea, will continue to be protected from encroaching residential development. Also, the creation of a buffer and voluntary open space area that is consistent with the RSCOD policies is a priority in this subarea" (Page 8-5).

Compliance with Plan policies: Luck Stone seeks to extend the permitted MR-HI zoning district to the south of the currently permitted Quarry D and to buffer the quarry pit from adjacent land areas within the Transition Policy Area and along Goose Creek. The proposed rezoning will ensure compliance with this comprehensive planning policy by protecting the County's active quarry operations and diabase-enriched lands from incompatible uses through proper application of its zoning powers.

(3) "The County will protect the Bull Run Quarry in the Lower Bull Run Sub-area and the Luck Stone Quarry in the lower Sycolin Sub-area from

incompatible uses by ensuring that encroaching new development does not hinder the quarry operation" (Page 8-8).

Compliance with Plan policies: The proposed rezoning will ensure compliance with this comprehensive planning policy by extending the MR-HI zoning district south of the planned Quarry D to the Dulles Greenway and providing the opportunity for development of a compatible adjacent non-residential use.

- (4) "The County's vision for the Transition Policy Area is for land uses that provide a visual and spatial transition between the suburban development in the east and rural development in the west. The Transition Policy Area will be developed as a unique and innovative blend of rural and suburban development features that fully integrate the elements of the Green Infrastructure, and establish natural open spaces as a predominant visual element and enhancement to the area's river and stream corridors" (Pages 8-1 & 8-2).

Compliance with Plan policies: The proposed rezoning will implement the open space provisions of the Revised General Plan and maintain a balance between the built and natural environment. The proposal provides for a 300 foot no-build buffer to be provided along most of the Goose Creek frontage, providing for a continued open space network and visual buffer between the proposed development and this state-designated scenic river. Additional open space and natural open space will be maintained along the buffer on portions of the Property. The proposed rezoning will respect the Goose Creek stream corridor and reservoir, and related wetlands, floodplains, cultural resources, steep slopes and potential wildlife habitats.

- (5) "Create and supplement the 300-foot buffer and 1000-foot voluntary open space area proposed along the Goose Creek and the Goose Creek Reservoir and the Beaverdam Reservoir in the Lower Sycolin and Middle Goose subareas, consistent with the RSCOD policies" (Page 8-8).

Compliance with Plan policies: The proposed rezoning and special exceptions will implement this policy recommendation such that much of the Property will be buffer area and open space surrounding both the proposed quarry pit area and the future water treatment plant. A 300 foot no-build buffer will be provided along Goose Creek beginning just north of an existing slope/maintenance easement associated with the Dulles Greenway. The buffer will extend along the Property's Goose Creek frontage as part of ZMAP-2009-0003. In addition, the no-build buffer will be expanded as part of the companion water treatment plant SPEX-2009-0021. Extensive berms and landscaping (anticipated to be between 10 and 20 feet high and landscaped with tree cover) are proposed as part of SPEX-2009-0027 and protect adjacent residentially zoned properties from the visual and auditory impacts of the quarry use and will augment the buffer adjacent to the Goose Creek. A required 150 foot building setback along the Dulles Greenway will also be provided.

B. Green Infrastructure Recommendations - Mineral Resource Extraction Policies

In adopting the Revised General Plan, Loudoun County determined that its non-renewable diabase rock assets are important economic and natural resource elements that deserve protection for future use as components of the County's "Green Infrastructure." The Revised General Plan notes that the site-specific nature of quarries can help the County focus

protection on key diabase resource areas and emphasize the continued viability and compatibility of quarrying operations. In discussing Loudoun's diabase rock assets as Green Infrastructure components, Chapter 5, Pages 5-15 and 5-16, of the Revised General Plan provides the following recommendations:

- (1) "Quarrying is an industry based on the natural resources of the County and shall be encouraged and the resource protected."**

Compliance with Plan policies: Loudoun County benefits from significant reserves of high-quality mineral resources. Loudoun's particular variety of diabase—a fine-grained igneous trap rock with a coarse and uniform texture—is darker in color and has been found to withstand pressure of up to 23,000 pounds per square inch. Other than a slight darkening of its color, the stone undergoes no change on an exposure of 25 years. Loudoun's diabase belt runs in a north-south direction, largely paralleling Belmont Ridge Road.

Luck Stone's Leesburg Plant has recovered much of this unique aggregate and provided much of the crushed stone and gravel for construction in Loudoun County over the past three decades. As one of the largest private, family owned and operated aggregates suppliers in the nation, Luck Stone is proud to be located within Loudoun County and assist in the recovery of the County's remaining mineral resources in an environmentally-sensitive manner.

The company's quarrying operations are important employers and economic assets and the proposed rezoning will not only ensure compliance with this comprehensive planning policy, but will ensure that Luck Stone can continue to provide essential raw materials for roads, construction, manufacturing, landscaping, and more.

- (2) "The County will recognize and protect its viable extraction industry. The County will protect viable quarries and its diabase resource areas from incompatible neighboring uses. New development will take existing quarries into account."**

Compliance with Plan policies: Section 3-1001 of the Zoning Ordinance establishes the MR-HI district specifically for the purpose of protecting the County's diabase rock as a mineral resource, to provide for diabase resource extraction operations at appropriate locations, and to co-locate with quarries heavy industrial uses compatible with resource extraction. Luck Stone is petitioning Loudoun County to use its zoning authority to protect and preserve its valuable geologic assets from future land development by rezoning the Subject Properties to the MR-HI zoning district. Loudoun Water's proposed water treatment plant (SPEX-2009-0021) will be a compatible adjacent use.

- (3) "The County will foster efficient use of its diabase resource. To help achieve this goal, the County will maintain a quarry zoning district that should provide a total of at least 800 acres in Loudoun County to be set aside for extraction and associated activities. The quarry zoning district will make quarrying a permissible use. No residential uses other than watchman's quarters will be permitted in this district. Non-residential uses will be limited to low coverage, heavy industrial uses that will not be adversely affected by quarry operations."**

Compliance with Plan policies: The proposed rezoning will make efficient use of the Property's mineral resources and associated extraction activities, particularly when coupled with companion MR-HI rezoning requests on two parcels to the north, Luck Stone's approved "Quarry D", and Luck Stone's existing Leesburg Plant quarry operation. Further, no residential uses will be permitted within the proposed MR-HI zoning district expansion area. The proposed water treatment plant (SPEX-2009-0021) is a low coverage use that will not be adversely affected by quarrying operations.

- (4) "Quarry zoning districts should be located on areas where quarries presently exist and/or in industrial communities where the diabase is within the Ldn 65-noise contour of an airport. Areas within the 65 Ldn noise contour and adjoining existing quarries should be preserved for this purpose."**

Compliance with Plan policies: As stated above, the requested MR-HI zoning is proposed as an expansion to Luck Stone's approved "Quarry D" and existing Leesburg Plant quarry operation. A portion of the Property is located within the Ldn 60 1-mile buffer of the Leesburg Airport.

- (5) "The County will facilitate the long-range planning of quarry sites, including setting aside sufficient land for extraction and creating an environment that will be attractive for future users once the quarrying use is no longer viable."**

Compliance with Plan policies: Luck Stone has filed SPEX-2009-0027 for stone quarrying uses on a portion of the Property and is committed to long-range planning of its existing and future quarries once mineral resource extraction has ceased. In line with the Central Water Supply Program, Loudoun Water desires to use Luck Stone's vacated quarries for Water Banking (water storage). Reuse of "Quarry D" for a public purpose by a public utility such as Loudoun Water is provided for in related proffer commitments associated with that property. Luck Stone and Loudoun Water have also entered into a non binding agreement to consider Water Banking as an option for Luck Stone's quarries in the area as a means of securing up to 8 billion gallons of water storage capacity. Luck Stone is also exploring the potential for recreational and other feasible reclamation uses that would benefit the public.

Luck Stone has also sought ways to contribute to the overall biodiversity picture of Loudoun County by enhancing the environmental aspects of ongoing quarrying operations, including providing places for a wide variety of wildlife and a host of plant species that wildlife can feed upon that might not be available in adjacent non-quarry areas.

- (6) "The County will develop and apply standards that seek to protect existing and planned neighboring uses from the negative impacts of resource extraction activities. Such negative impacts might include threats to property values, public health and safety, as well as short- and long-term environmental degradation. Such impacts will be mitigated by buffer requirements, noise mitigation requirements, and other mitigation techniques."**

Compliance with Plan policies: Luck Stone is committed to being a good neighbor, and strives to serve as an asset to the communities in which it operates. Luck Stone

has constructed landscaped berms between quarry limits and adjacent properties, maintained tree cover on non-quarry lands, constructed aesthetically-appropriate fencing and improved the entrance features to its properties, routinely met with homeowners associations and property owners to keep them informed as to future quarrying plans and blasting schedules, and worked to ensure that dirt and other quarrying debris are removed from transport vehicles prior to leaving the quarry site.

Luck Stone has filed SPEX-2009-0027 for stone quarrying uses and any future quarrying activity on the Property will be in line with past practices and will protect existing and planned neighboring uses from the negative impacts of its resource extraction activities. The present rezoning only seeks to protect and preserve the Property's valuable geologic assets from future land development by rezoning it to the MR-HI zoning district.

- (7) "Diabase extraction activities must be located with direct access to roads that are constructed to industrial standards. These standards will be applied so that quarries have adequate roads linking them to the regional road network."**

Compliance with Plan policies: While stone quarrying uses are not being proposed in this application, the Property has access to Gant Lane, Rt. 652. However, future quarry use of the Property will comply with Condition 18 under SPEX 1999-0006, whereby Luck Stone is effectively permitted to ship quarried rock material only via Belmont Ridge Road, and Luck Stone anticipates only using Route 659 for truck access in the future.

- (8) "The County will encourage the innovative and sensitive reuse of quarries and resource extraction sites."**

Compliance with Plan policies: Luck Stone is committed to long-range planning of its existing and future quarries once mineral resource extraction has ceased. A chief aim of the Central Water Supply Program is the reuse of exhausted quarries for Water Banking. Reuse of "Quarry D" for a public purpose by a public utility such as Loudoun Water is provided for in related proffer commitments associated with that property. Luck Stone and Loudoun Water have also entered into a non binding agreement to consider Water Banking as an option for Luck Stone's quarries in the area as a means of securing up to 8 billion gallons of water storage capacity. Luck Stone anticipates that its request for quarrying activity on the Property will be accompanied by an innovative and sensitive reclamation plan that provides a concept plan for use of the Property per SPEX-2009-0027 after extraction is complete.

- (9) "An application to permit the development of new quarries or the expansion of existing quarries will include a concept plan for use of the site after extraction is complete."**

Compliance with Plan policies: The current rezoning only seeks to protect and preserve the Property's valuable geologic assets from future land development by rezoning it to the MR-HI zoning district. Luck Stone anticipates that its request for quarrying activity on the Property per SPEX-2009-0027 will be accompanied by an innovative and sensitive reclamation plan that provides a concept plan for its use after extraction is complete.

C. Green Infrastructure Policies, General

Other general Green Infrastructure policies are recognized in the Revised General Plan:

- (1) **"The County recognizes its Green Infrastructure as a collection of natural, cultural, heritage, environmental, protected, passive, and active resources that will be integrated in a related system. It will provide the framework for strategic land use planning policies, provide the context for all development and ensure quality of life throughout the County. It includes major rivers, stream corridors, floodplains and wetlands; lakes; reservoirs and impoundments; limestone conglomerate, mineral resources and prime agricultural soils, steep slopes; ridges and mountainsides; protected forests and vegetative landscapes; wildlife and endangered species habitats; heritage resources; scenic corridors, parks, greenways, trails, and recreational facilities." (page 5-2)**

Compliance with Plan policies: The Property generally contains a mixture of open fields and a combination of evergreen and deciduous forested areas. In addition to the mineral resources that have been discussed, other Green Infrastructure elements have been identified on the rezoning plat submission and include the Goose Creek stream corridor, wetlands, floodplain, steep slopes and cultural resources. It is anticipated that clearing or grading will generally be limited to areas outside of the Plan recommended 300-foot no build buffer along Goose Creek so as to minimize disturbance of these elements. Any disturbance within other designated wetland areas will be permitted with the Army Corps of Engineers prior to site plan approval. More specific detail will be provided in companion special exception application filings for the proposed quarry and water treatment plant uses.

- (2) **A conservation design method will be applied during the land development and redevelopment processes. Elements of the Green Infrastructure will be identified with the initial submission of each proposal, as a guide to the placement of structures, drainage, utilities, and roads...." (Page 5-2)**

Compliance with Plan policies: Green Infrastructure elements have been identified as noted, along with existing areas of disturbance related to easements and roads in order to establish both no-build and clearing and grading limits on the Property. Land disturbance associated with the necessary extension of utilities for the future proposed water treatment plant use will be minimized to the extent possible. In the southern portion of the Property, utilities will be located as close as possible to existing easement areas. More specific detail will be provided in companion Special Exception application filings for the proposed quarry and water treatment plant uses.

Existing Zoning, Current/Permitted Land Uses

The Property is zoned TR-10. This district permits residential development at 1 unit per 10 acres. A water treatment plant is permitted by Special Exception in the TR-10 District but quarries are not. Plan policies which seek to protect mineral resource cannot be implemented under existing zoning.

Proposed Zoning, Permitted Land Uses

Rezoning of the Property to the MR-HI District would provide zoning compatibility for a parcel that is located near an approved quarry and is currently part of a quarry overlay district. Future

use of a portion of the parcel for a water treatment facility and quarry would be in keeping with the recommendations of the Revised General Plan.

The following responses are provided in accordance with Sec. 6-1211(E) of the Zoning Ordinance to assess potential impacts and proposed mitigation measures related to the proposed rezoning:

- (1) Whether the proposed zoning district classification is consistent with the Comprehensive Plan.

Response: For reasons discussed above, the proposed MR-HI rezoning for future stone quarrying uses are consistent with the Revised General Plan and the Countywide Transportation Plan.

- (2) Whether there are any changed or changing conditions in the area affected that make the proposed rezoning appropriate.

Response: Luck Stone's "Quarry D", was rezoned to the MR-HI District consistent with provisions of the Revised General Plan and a substantial portion of the Property is within the Quarry Overlay District. Since the Revised General Plan's adoption, significant residential development has been constructed, approved, or proposed within the Property's vicinity, diminishing the certainty that the County's diabase rock resources will be protected and utilized in the future. Significant commercial development has occurred, and is occurring, near the Property, including the Goose Creek Village development. Furthermore, the future Dulles Metrorail Extension project (scheduled to be opened in 2015) along the Dulles Greenway will provide a dynamic transportation center in the coming years that will create a powerful economic engine for Loudoun County.

The Revised General Plan contemplates that diabase rock resources of high-quality exists outside the boundaries of previously-approved quarry properties and that it is important to protect the County's active quarry operations and diabase-enriched lands from incompatible uses through proper application of its zoning powers. Through the adoption of the Revised General Plan, the Loudoun County Board of Supervisors recognized the importance of its diabase rock assets and determined that these assets were elements of its "Green Infrastructure". This application is being filed to implement the Revised General Plan's goals.

- (3) Whether the range of uses in the proposed zoning district classification are compatible with the uses permitted on other property in the immediate vicinity.

Response: Though the uses permitted in the proposed MR-HI zoning district are different than those permitted in the TR-10 and PD-IP zoning districts, they are nevertheless compatible with the Revised General Plan policies that govern this area, as well as the existing and planned land uses within the vicinity of the Property. The Property is located in the vicinity of the existing Leesburg Quarry and its approved expansion for Quarry D, and possesses excellent diabase rock assets. For reasons stated above, the existing TR-10 zoning of this land is not appropriate to achieve implementation of the Revised General Plan's policy goals.

A water treatment plant is permitted in the MR-HI, PD-IP and Tr-10 Districts and can be designed as a compatible use adjacent to other permitted uses in those districts.

- 4) Whether adequate utility, sewer and water, transportation, school and other facilities exist or can be provided to serve the uses that would be permitted on the property if it

were rezoned.

Response: Luck Stone intends to use the existing private sanitary drainfield and water well on MCPI 151-16-0598 to the north to provide service to its on-site employees. The potable water usage and wastewater generation of the quarry use is minimal. With no residential proposed, there will be no effect on the school system. Transportation considerations are discussed above and are incorporated herein.

Loudoun Water will be constructing the proposed water treatment plant and will provide water and wastewater service to the facility. Transportation impacts associated with the water treatment plant use are not significant and are more specifically addressed in the companion special exception.

- (5) The effect of the proposed rezoning on the County's ground water supply.

Response: The proposed rezoning will not have an effect on the County's groundwater supply. Any future stone quarrying use proposal will include a detailed Hydrogeologic Assessment of the Subject Property. The water treatment plant proposed in the companion special exception will be developed in accordance with the Goose Creek Watershed Protection Program. Best Management Practices will be utilized to accommodate surface water runoff, and will include the implementation of Low Impact Development techniques to maximize and protect groundwater recharge.

- (6) The effect of uses allowed by the proposed rezoning on the structural capacity of the soils.

Response: Soil characteristics of the Subject Properties are shown on the Existing Conditions Plat; however, by virtue of the nature of the application, this factor is not applicable. Any future special exception applications for stone quarrying uses will remove the top soils and overburden resting on top of the diabase rock and will use it to construct the perimeter berms.

The proposed water treatment plant will be constructed to insure that foundations are within the structural capacity of soils on the Property.

- (7) The impact that the uses that would be permitted if the property were rezoned will have upon the volume of vehicular and pedestrian traffic and traffic safety in the vicinity and whether the proposed rezoning uses sufficient measures to mitigate the impact of through construction traffic on existing neighborhoods and school areas.

Response: As shown in the Transportation Analysis prepared by Patton, Harris, Rust & Associates, no increases in vehicle trips will occur by virtue of the proposed quarry expansion, and a negligible increase will result from the proposed development of a water treatment plant on a portion of the Subject Properties. Under Condition 18 under SPEX 1999-0006, Luck Stone is effectively permitted to ship quarried rock material only via Belmont Ridge Road, and Luck Stone anticipates only using Route 659 for truck access in the future with approved quarry use of the Subject Properties. Because the output of the stone crushing operation at the Leesburg Plant (Quarries "A" and "B") will remain in its present location, even after quarrying operations begin west of Goose Creek, expansion of the existing quarry will therefore only extend the useful life of the existing quarry. There will be no increase in product output or vehicular trips using Belmont Ridge Road or any other roadway as a result of these proposals. The Transportation Access section outlined above is incorporated herein.

- (8) Whether a reasonably viable economic use of the subject property exists under the current zoning.

Response: While the existing TR-10 zoning presently allows reasonable use of the Property, it is not the best district by which to implement the Revised General Plan's Policies. The existing TR-10 zoning district does not act to protect the Property's valuable mineral resources nor does it insure implementation of other Green Infrastructure elements of the Revised General Plan such as a 300 foot buffer along Goose Creek. It also does not permit extractive industry. The Revised General Plan recognizes the importance of protecting non-renewable Loudoun County resources, such as the high-grade diabase rock, for a future economic use to benefit the County and its citizens.

- (9) The effect of the proposed rezoning on the environment or natural features, wildlife habitat, vegetation, water quality and air quality.

Response: As a part of the proposed MR-HI rezoning, Loudoun Water and Luck Stone Corporation retained the services of Wetlands Studies and Solutions to prepare a detailed environmental report for the Property. While the proposed rezoning will have no negative impacts upon protected wetlands, floodplains, or other natural features within the area proposed as a 300-foot no-build buffer along the Goose Creek frontage, it is anticipated that SPEX-2009-0027 for stone quarrying uses will have an impact on areas beyond it. Luck Stone will seek to mitigate any negative impacts on-site or within Loudoun County. More specific detail will be provided in companion special exception application filings for the proposed quarry and water treatment plant uses as to the effect of the proposed development on these environmental/natural features.

- (10) Whether the proposed rezoning encourages economic development activities in areas designated by the Comprehensive Plan and provides desirable employment and enlarges the tax base.

Response: As previously mentioned, the proposed uses will protect a non-renewable Loudoun County resource, namely high-grade diabase rock, for a future economic use to benefit Loudoun County and its citizens. The location of this non-renewable resource is noted in the Revised General Plan and Toll Road Plan with policies that support the protection of the high-grade diabase rock for future use. Additionally, the extension of the life of the quarry will ensure that the real property tax revenue benefits to Loudoun County are continued for an extended period. It should be noted that the proposed uses will have no impact on the Loudoun County's public school system.

- (11) Whether the proposed rezoning considers the needs of agriculture, industry, and businesses in future growth.

Response: The proposed rezoning considers the needs of industrial and commercial businesses, and is in conformance with the land use and density policies of the Revised General Plan. Luck Stone's quarry operations are a valuable and important industry that supports many other industries in the County. The proposed MR-HI rezoning will allow for high-grade diabase rock assets to be protected for future utilization by Loudoun County industry, agriculture, and businesses. Diabase stone resources are critical for use in a growing jurisdiction and are not amenable to long-distance transportation. As a result, locally-serving diabase rock quarries are crucial for the long-term economic development of Loudoun County. Luck Stone's Leesburg Plant will continue to serve

these industries for many years to come if the Board of Supervisors approves this application.

- (12) Whether the proposed rezoning considers the current and future requirements of the community as to land for various purposes as determined by population and economic studies.

Response: The proposed rezoning considers Loudoun County's current and future requirements as to land for various purposes as well as the fluidity of the commercial and office market, and seeks to best position future use of the Property, both commercial and public in nature, to support the long-term marketability and suitability of all land uses in the community.

- (13) Whether the proposed rezoning encourages the conservation of properties and their values and the encouragement of the most appropriate use of land throughout the County.

Response: The proposed rezoning complements planned land uses while not overburdening existing neighborhoods. This proposed rezoning will not adversely affect property values; it is the best zoning district to protect the Property's diabase resources and to protect against any incompatible residential uses in the Transition Policy Area.

- (14) Whether the proposed rezoning considers trends of growth or changes, employment, and economic factors, the need for housing, probable future economic and population growth of the county and the capacity of existing and/or planned public facilities and infrastructure.

Response: According to U.S. Census Bureau estimates, the population in Loudoun County increased from 169,599 in 200 to 301,171 in 2009 (a 77.6 percent increase). While the 2010 Census count will not be made public until later this year, this application proposes to safeguard a sensitive non-renewable resource that is and will be important to development and construction throughout the County. The proposed rezoning will provide an opportunity to protect such a valuable resource to ensure the continued economic viability of the Leesburg Plant and to provide an efficient, dependable means of providing for public water to the area served by Loudoun Water's Central Water Supply System

- (15) The effect of the proposed rezoning to provide moderate housing by enhancing opportunities for all qualified residents of Loudoun County.

Response: No housing is proposed for this project, therefore this factor is not applicable.

- (16) The effect of the rezoning on natural, scenic, archaeological, or historic features of significant importance.

Response: The uses proposed as part of the proposed rezoning will not significantly impact any natural, scenic, archaeological, or historic features. Future stone quarrying and the water treatment plant will be maintained outside the major floodplain along Goose Creek, as shown on the rezoning plat.

Although a number of archeological sites were recorded during the cultural resource investigations conducted on the Subject Property, only one archeological site (#44LD1324), was recommended for further study if impacts were to occur. A Phase II

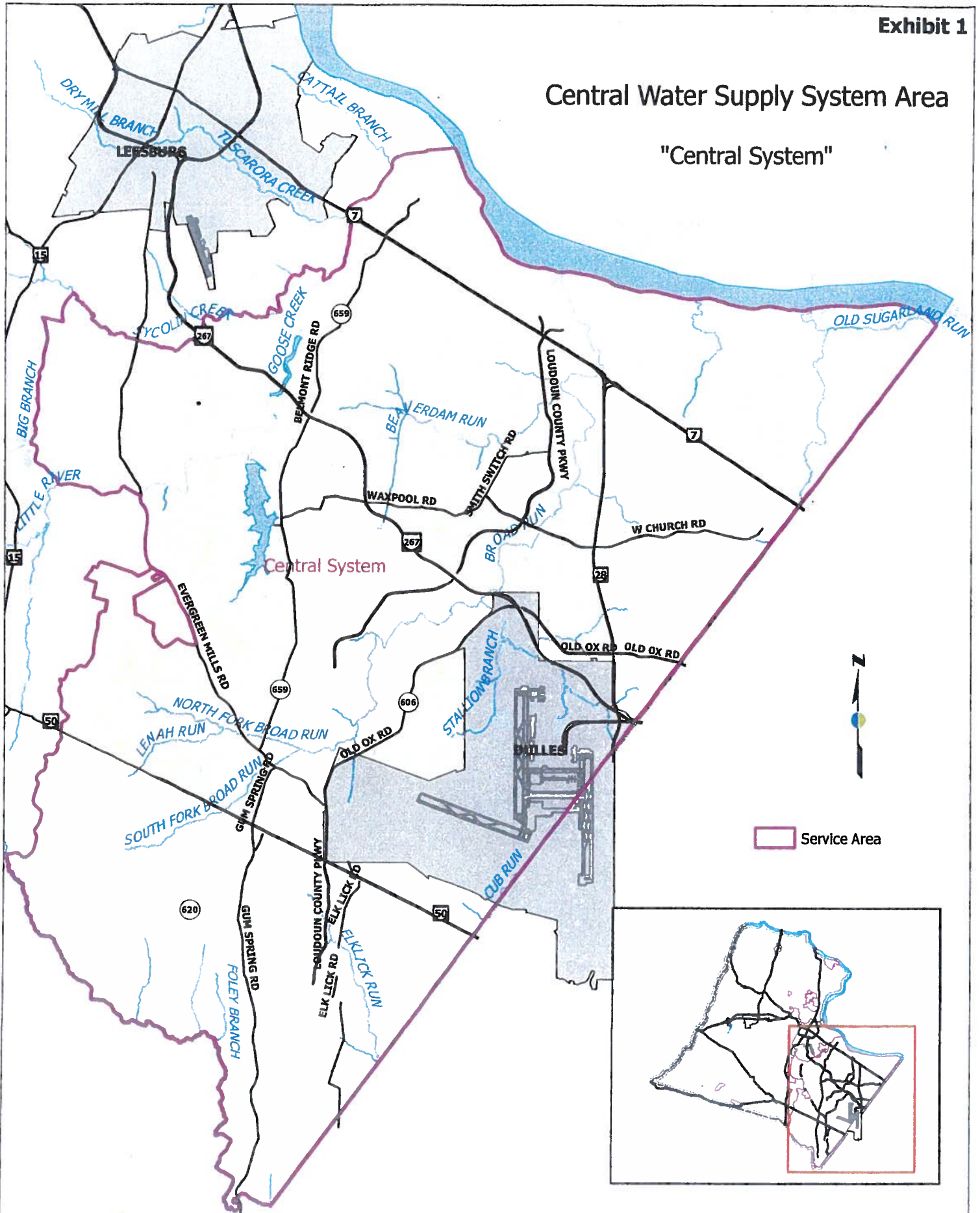
study conducted for the site by Thunderbird Archaeology in accordance with the 2009 DHR Guidelines for Archeological investigations indicated disturbance at the site. Additionally, the field supervisor and principal investigator met or exceeded the Secretary of Interior's Standards. Most of the artifacts were recovered from secondary, post occupational deposits. The site is not considered to be eligible for the National Register of Historic Places and no additional archeological work is recommended. A report entitled, "Phase II Archeological Evaluation of Site 44LD1324," is included for Staff's review.

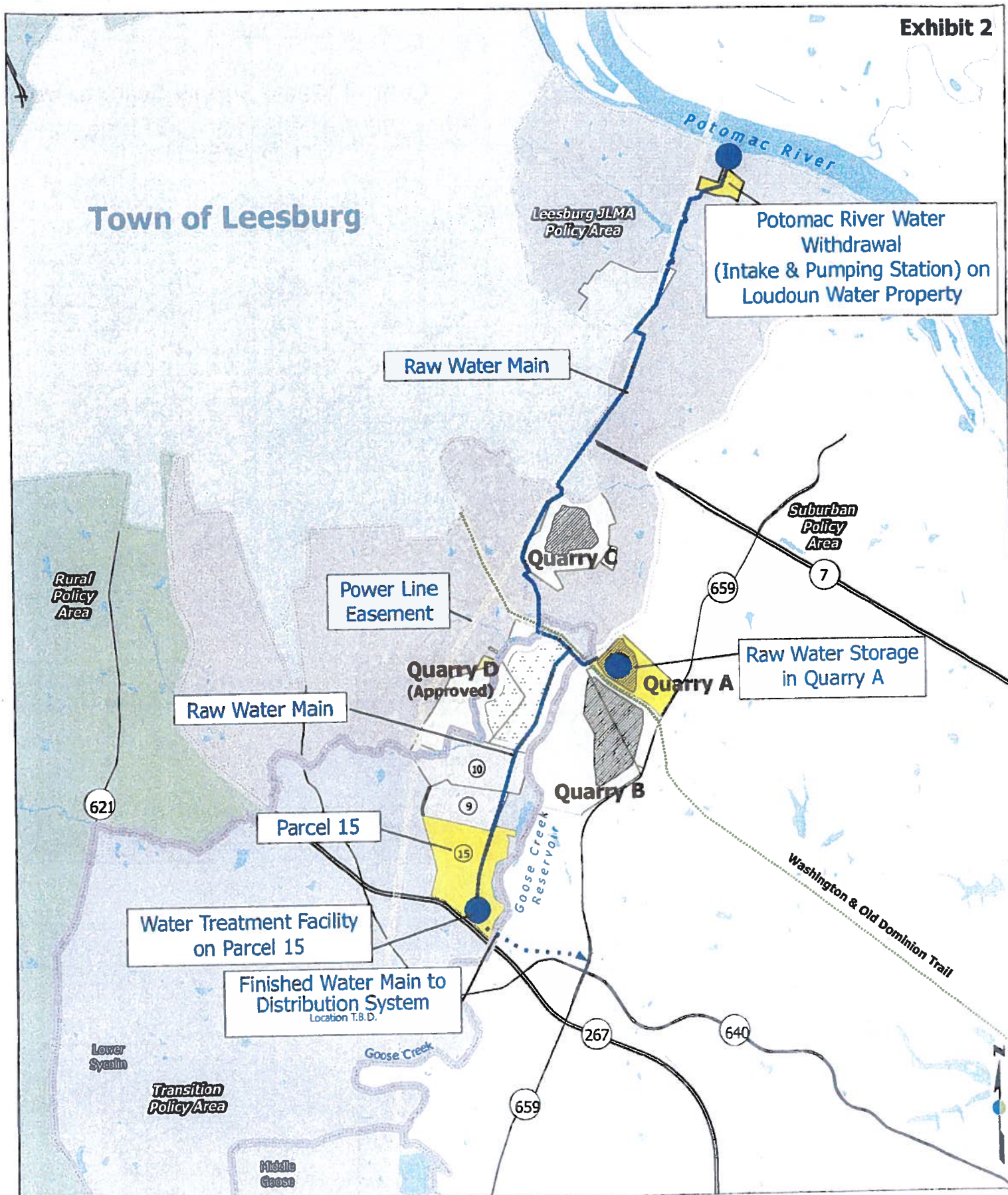
Conclusion

For the foregoing reasons, Loudoun Water and Luck Stone Corporation respectfully submit that the Property should be rezoned to the MR-HI zoning district. The proposed zoning is in conformance with all applicable elements of the Revised General Plan, would provide a vehicle for protecting the nonrenewable diabase rock resource for future economic development utilization, and would provide an opportunity for optimizing water service to the Central Water Supply System of the County. No additional vehicle trips are anticipated by virtue of this proposal as it relates to a future quarry use, and relatively few trips are anticipated with the proposed water treatment plant. Loudoun Water and Luck Stone Corporation look forward to working with Loudoun County on this important application.

Central Water Supply System Area

"Central System"





Legend

- Parcels
- Town
- Major Powerline Easement
- River/Stream
- Central Water Supply Components
- Existing Pit Based on 2008 Info
- Future Pit
- Policy Areas
- JLMA
- Rural
- Suburban
- Transition Area

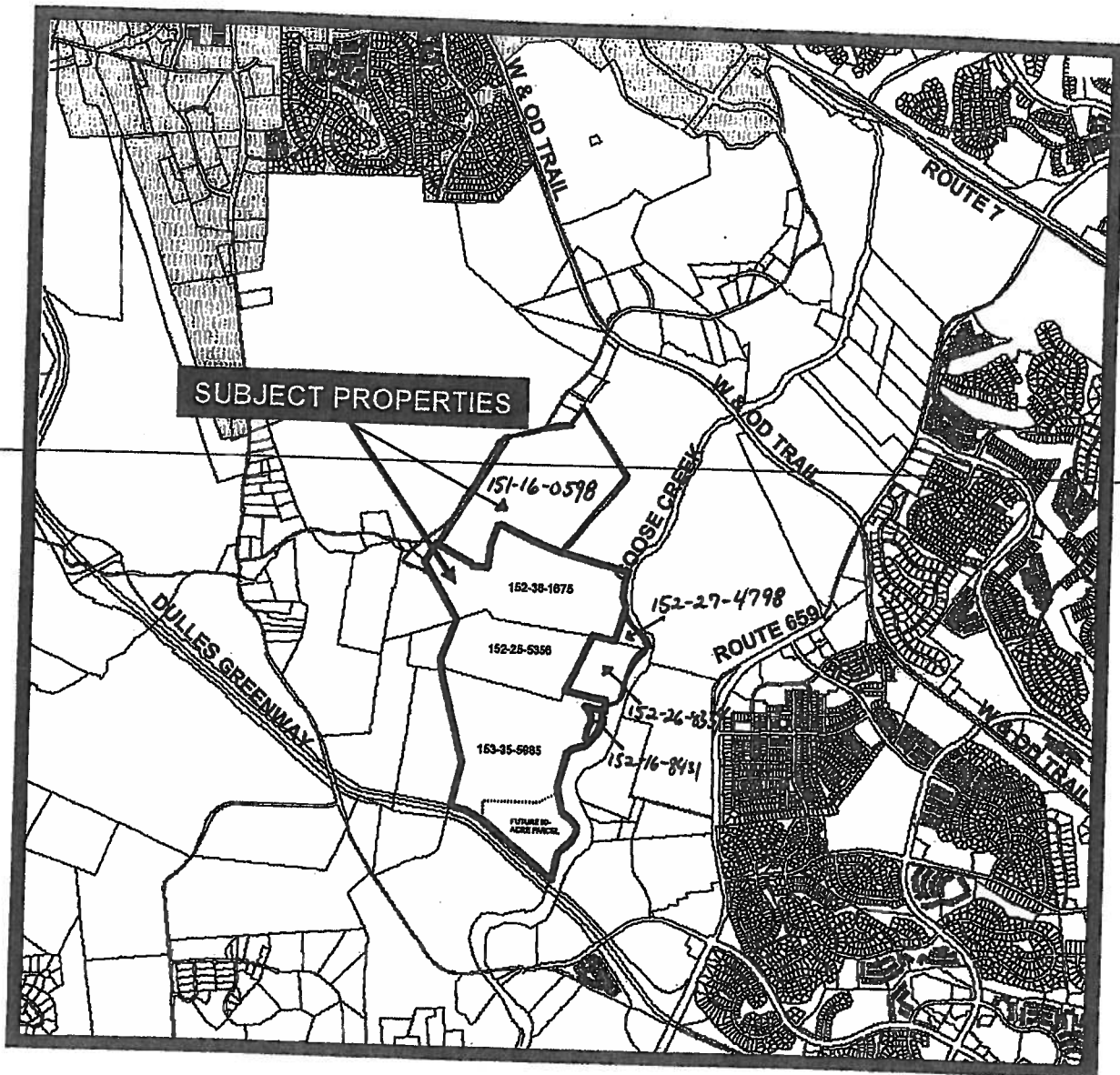
LOUDOUN WATER

0 1,500 3,000 6,000 9,000 Feet

Central Water Supply Program

February 2009

LUCK STONE CORPORATION / LOUDOUN WATER
VICINITY MAP





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**WALSH COLUCCI
LUBELEY EMRICH
& WALSH PC**

August 27, 2010

Via Email & Hand Delivery

Ms. Jane M. McCarter, AICP, Project Planner
Loudoun County Department of Planning
1 Harrison Street, S.E., Third Floor
Leesburg, Virginia 20177



Re: Third Submission: Luck Stone Applications; ZMAP 2009-0003, SPEX 2009-0027, and SPEX 2010-0013

Dear Ms. McCarter:

On behalf of Luck Stone Corporation, (hereinafter, "Luck Stone"), please find enclosed materials related to Luck Stone's third submission of the above-referenced rezoning and special exception applications. These applications are being resubmitted and processed concurrently with ZMAP 2009-0004 and SPEX 2009-0021. We look forward to completing the review of each staff referral by September 6, 2010 in anticipation of an October 27, 2010 Planning Commission public hearing.

For your review, please find enclosed:

- 1) Fifteen copies of the updated Statement of Justification for ZMAP 2009-0003;
- 2) Fifteen copies of the updated Statement of Justification for SPEX 2009-0027;
- 3) Fifteen copies of the referral response letter for ZMAP 2009-0003;
- 4) Fifteen copies of the referral response letter for SPEX 2009-0027;
- 5) Fifteen copies of the proposed proffers for ZMAP 2009-0003;
- 6) Fifteen copies of the suggested conditions for SPEX 2009-0027 based largely upon prior special exception conditions in SPEX 1990-0019, SPEX 1999-0006, and SPEX 2002-0018;
- 7) Fifteen copies of the suggested conditions for SPEX 2010-0013;
- 8) Fifteen copies of the print set for ZMAP 2009-0003 prepared by Dewberry & Davis, LLC;

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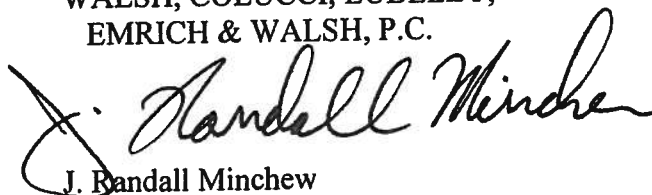
ATTORNEYS AT LAW

- 9) Fifteen copies of the print set for SPEX 2009-0027 prepared by Dewberry & Davis, LLC;
- 10) Fifteen copies of the print set for SPEX 2010-0013 prepared by Dewberry & Davis, LLC;
- 11) Fifteen updated copies of a narrative plan for reclamation of the Subject Properties following cessation of mining activities, per Section 3-1008(G) of the Zoning Ordinance;
- 12) Fifteen updated copies of the Conceptual Description of Proposed Operations & Evaluation of Feasibility of Operations without Hazards or Damage to Other Properties; and
- 13) Three copies of the Technical Memorandum, dated March 31, 2010 and prepared by Dr. G. Sauer Corporation, discussing risk mitigation measures and contingency planning for tunneling under Goose Creek. This memorandum was prepared for Environmental Review Team staff.
- 14) Three copies of the joint referral response matrix for ZMAP 2009-0003 and ZMAP 2009-0004;

Electronic versions of the above materials are also included for your review. Thank you for your time and consideration in this matter and please feel free to call me or Andrew Painter directly at (703) 737-3633 should you have any questions.

Very truly yours,

WALSH, COLUCCI, LUBELEY,
EMRICH & WALSH, P.C.



J. Randall Minchew

Enclosures, as stated

cc: Mr. Brian J. Lubkeman, McGuireWoods, LLP
Mr. Jonathan P. Rak, McGuireWoods, LLP
Ms. Karen A. Arnold, Senior Planner, Loudoun Water
Ms. Lori Greenlief, McGuireWoods, LLP
Mr. Douglas D.R. Palmore, Luck Stone Corporation
Mr. Mark Peterson, Luck Stone Corporation

Ms. Jane M. McCarter, AICP
August 27, 2010
Page 3 of 3

Mr. Mark Vigil, Luck Stone Corporation
Mr. William J. Keefe, Walsh Colucci
Mr. Andrew A. Painter, Walsh Colucci

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**WALSH COLUCCI
LUBELEY EMRICH
& WALSH PC**

August 27, 2010

Via Email & Hand Delivery

Ms. Jane M. McCarter, AICP, Project Planner
Loudoun County Department of Planning
1 Harrison Street, S.E., Third Floor
Leesburg, Virginia 20177

**Re: Third Submission: ZMAP 2009-0003, Luck Stone Quarry Extension
(Responses Pertaining To ZMAP 2009-0004, SPEX 2009-0027, and SPEX
2009-0013 Where Applicable)**

Dear Ms. McCarter:

On behalf of Luck Stone Corporation, this letter addresses and provides you with a written response to the referral agency comments in the above referenced application.

Consistent with Luck Stone's May 6, 2010 submission, this submission includes separate response letters for ZMAP 2009-0003, SPEX 2009-0027, and SPEX 2010-0013. As Staff responded to the previous submission materials by incorporating some or all of the foregoing applications into one or more comment letters, separating out individual comments from multiple letters has proven somewhat impractical. To ease review by Staff therefore, this document contains responses to ZMAP 2009-0004, SPEX 2009-00027, and SPEX 2009-0013 where Staff's prior letters have similarly incorporated such applications. For your convenience, each of the staff comments are stated below and the Applicant's responses follow in bold italics.

**LOUDOUN COUNTY DEPARTMENT OF PLANNING-COMMUNITY PLANNING;
COMMENTS PERTAINING TO ZMAP 2009-0003 & SPEX 2009-0027 (PAT GIGLIO,
7/12/10)**

1. Staff finds that the proposed rezoning of the subject site for use as a quarry and water treatment facility conforms to the general land use, mineral extractive and public facilities policies of the Revised General Plan. Staff continues to recommend that proffers be developed to limit the number of uses provided on the subject site within the MR-HI (Mineral Resource-Heavy Industry) zoning district to only "stone quarrying" and "water treatment plant" to ensure compatibility with the surrounding area and consistency with Plan policies. The proposal to permit an "asphalt mixing plant" and/or "concrete

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mixing plant” as an accessory use on the subject site in the future is not supported by Plan policies.

Applicant Response: In response to Staff’s suggestion as well as a discussion during an August 3, 2010 meeting with Staff, the Applicant has provided a revised proffer commitment which speaks to uses being sought for the Subject Property [see proposed Proffer I.A].

2. Staff defers to the Department of Building and Development Environmental Review team (ERT) for further technical review of those outstanding issues related to mitigation of impacts to jurisdictional wetlands and utilization of appropriate stormwater management techniques on the subject site.

Applicant Response: Acknowledged.

3. Staff recognizes that the reservation of up to 70% open space in association with an operating quarry may be unrealistic and counter to the goals of the mineral extractive policies, however a unique opportunity exists to develop a significant open space amenity on the subject site following cessation of use which will fulfill the open space policies of the Plan. Staff recommends that the Applicant commit to the provision of a minimum of 70% open space in conjunction with any adopted concept reclamation plan for the subject site following cessation of the quarry use.

Applicant Response: Given the potential for definitional changes and variable interpretations of the term “open space” over the coming century, as well as the lengthy time horizon for activation of the Reclamation Plan, the Applicant can commit to implementation of the Reclamation Plan as proposed and Sheet 7 of the Special Exception Plat, both of which meet current Revised General Plan open space calling for a minimum of 70 percent open space [see proposed Condition 22]. The Applicant further commits that, within five years prior to the conclusion of quarrying activities on the Subject Property, the Applicant will present a refined Reclamation Plan further specifying anticipated end users, which may include use by the public [see proposed Condition 22]. The determination as to whether the public will ultimately be granted access to the Subject Property cannot be determined at the present.

The Applicant discussed the Reclamation Plan and this issue with Staff on August 3, 2010, and acknowledges Staff’s belief that the proposed Reclamation Plan provides at least 70 percent open space following cessation of the quarry use. Following mineral extraction activities, the entire Subject Property is currently envisioned to be permanently preserved either as

private or public open space uses as forest and a body of water/water impoundment/water storage.

The Applicant notes that the Revised General Plan does not distinguish between “public” and “private” use of open space in fulfilling the definition of “open space.” This, however, may be subject to change in the coming decades. Accordingly, a commitment to the Reclamation Plan as currently proposed should provide predictability to both the County and the Applicant insofar as definitions of “open space” are concerned.

4. Staff recommends that the Applicant meet with County staff prior to the development and submission of the concept reclamation plan to discuss near-term and long-term opportunities for achieving and maintaining open space on the subject site.

Applicant Response: The Applicant met with Staff on August 3, 2010 to discuss this matter and has submitted an updated Reclamation Plan narrative and print set. As noted above, following cessation of mineral extraction activities, the entire Subject Property is currently envisioned to be permanently preserved either as private or public open space uses as forest and a body of water/water impoundment/water storage.

Given the potential for definitional changes and variable interpretations of the term “open space” over the coming century, as well as the lengthy time horizon for activation of the Reclamation Plan, the Applicant can commit to implementation of the Reclamation Plan as proposed and Sheet 7 of the Special Exception Plat, both of which meet current Revised General Plan open space calling for a minimum of 70 percent open space [see proposed Condition 22]. The Applicant further commits that, within five years prior to the conclusion of quarrying activities on the Subject Property, the Applicant will present a refined Reclamation Plan further specifying anticipated end users, which may include use by the public [see proposed Condition 22].

**LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT – ZONING
ADMINISTRATION; COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-
0027 & SPEX 2010-0013 (CINDY LINTZ 7/7/2010)**

Issues

1. Sections 3-1001 & 3-1002. The MR-HI district permits uses only to the extent they are compatible with resource extraction and contemplated as such in the Comprehensive Plan. Additionally, the Transition Policy Area discusses the importance of extractive industries and the water supply systems, but does not speak to all of the uses permitted in

the MR-HI zoning district. In the Zoning Tabulations Sheet (sheet 9), note #2 includes all "MR-HI Uses." Given the policies of the General Plan, the road access proposed, and that this is land currently in the transition zone being transferred to an industrial intensive zone; staff suggests limiting the list through proffers of permitted and Special Exception MR-HI uses in order to prohibit those that would *not* be compatible with the transitional zone. Examples of such uses that would require a more intensive transportation and land use include: Warehousing facility; Manufacture, processing, fabrication and/or assembly, distribution of products; motor vehicle storage and impoundment; storage of empty solid waste vehicles and containers, etc.

Applicant Response: In response to Staff's suggestion as well as discussion during an August 3, 2010 meeting with Staff, the Applicant has provided a revised proffer commitment which speaks to uses being sought for the Subject Property [see proposed Proffer I.A].

Plat

1. Sheet 1, General Note #3 and all applicable locations, remove the "+/-" symbol in front of the acreage.

Applicant Response: Revised as requested.

2. Sheet 1, General Note #13, Add a sentence that the project will comply with the standards set forth in Section 4-1500.

Applicant Response: Revised as requested.

3. Sheet 1, General Note #17, reference Section 4-1800.

Applicant Response: Revised as requested.

4. Sheet 1, General Notes, renumber the notes. Number 23 is missing.

Applicant Response: Revised as requested.

5. Sheet 2 and other sheets where applicable, update neighboring property data. County Records shows MCPI #153-37-0418 is owned by Purnima Sareen, and MCPI # 153-27-7697 is zoned PD-IP & PD-OP.

Applicant Response: Revised as requested.

6. Sheet 9, the second 5-1300 is a duplicate with incorrect information. Delete that section.

Applicant Response: Revised as requested.

7. Sheet 11, along the western boundary, show the 200' structure setback per Section 3-1007(E)(3).

Applicant Response: As noted on Sheet 9 the Owner will meet the requirements of Section 3-1007(E)(3) of the Zoning Ordinance.

8. Sheet 11, 12, 14 and all other sheets where applicable, correct the spelling of Sycolin Road in the note. Also remove "until a ZCPA is approved. Refer to ZMAP 2009-0003 Proffers."

Applicant Response: Revised as requested.

9. Sheet 11, 12, 14, simply label the open space, "open space per proffer 1B."

Applicant Response: Revised as requested.

Draft Proffer Statement

1. Throughout the proffer statement there is reference to "Applicant", staff suggests designating the "Applicant"

Applicant Response: Revised as suggested.

- 2.: Page 1, at the end of paragraph 1, staff suggests deleting the last sentence Section 6-1209(F) refers to substantial conformity.

Applicant Response: Given the potential for definitional changes and potential zoning ordinance amendments, over the coming century during which quarry operations will be ongoing, the Applicant prefers retaining this language as doing so is consistent with the current version of the Zoning Ordinance, and that it recognizes that the quarry location is approximate depending on the location of existing mineral resources.

3. Page 1 under Concept Development Plan, staff suggests changing the first sentence to "The Property shall be developed in substantial conformance with Sheet 1 and 10-12 of 16 of the Concept Development Plan of the plan set entitled "Luckstone Corporation: Leesburg Plant, Zoning Map Amendment Petition, Quarry D Extension" prepared by Dewberry dated June 1, 2009, and revised through May 5, 2010.

Applicant Response: Revised as suggested.

4. Page 2, staff suggests removing “The requested MR-HI special exception uses....and “Overburden Placement Area.” This should be a condition of the Special Exception not with the rezoning.

Applicant Response: Revised as suggested.

5. Page 2, under “B Open Space Between Sycolin Creek and Cochran Mill Road (Route 653)”, staff suggests changing the proffer to, “As shown on Sheet 11 and 12 of 16 of the Concept Development Plan, portions of the Property situated between Sycolin creek and Cochran Mill Road (Route 653) shall be kept in open space purposes as a “no-build” buffer area. With exception of the travel ways shown on the Concept Development Plan, no land development activities shall be permitted between Sycolin Creek and Cochran Mill Road (Route 653) except for agricultural uses, and forest/ tree maintenance in accordance with forestry and silvaculture practices approved by the County Urban Forester.”

Applicant Response: Revised as suggested, with the additional language that this portion of the property may include the location of roads/travelways as shown on the Concept Development Plan and the location of utility lines. Additionally, the proposed language notes that this portion of the Subject Property will be kept in open space with the understanding that the Applicant reserves the right to amend the Proffer Statement and Concept Development Plan to permit development in the future [see proposed Proffer I.D]. This portion of the Subject Property was kept in identical temporary open space uses under ZMAP 1999-0004, and the Applicant prefers inserting similar language to that included in Proffer 3 of ZMAP 1999-0004.

6. Page 2 under “C Open Space Along Goose Creek”, staff suggests replacing the proffer with: “As shown on the Concept Development Plan Sheet 10 & 11 of 16, the PD-GI zoned portions of the Property will be kept as open space as a “no-build” buffer area. No land development activities shall be permitted in the PD-GI zone except for agricultural uses, and forest/ tree maintenance in accordance with forestry and silvaculture practices approved by the County Urban Forester.”

Applicant Response: Revised as suggested, with the additional language that permissible activities may include a scenic trail, subsurface utility line extensions that will not disturb existing vegetation within the buffer area and those activities necessary to the maintenance of the Goose Creek and Goose Creek Reservoir [see proposed Proffer I.C].

7. Page 2, under “D. Existing Undisturbed Forested Areas” staff suggests inserting “of 16” after “...Sheets 10, 11 and 12...”

Applicant Response: Revised as suggested.

8. Page 3, under “E. Restricted Use of Route 653”, staff suggests inserting both the name of the road and the route number for both roads, “Gant Lane (Rt. 652) & Cochran Mill Road (Rt 653)” in the title of this proffer and within the proffer.

Applicant Response: Revised as suggested.

9. Page 3, under “E. Restricted Use of Route 653”, staff suggest changing the SPEX XXXX-XXXX to SPEX-2010-0013.

Applicant Response: Revised as suggested.

10. Page 4 under “A Proffer Fulfillment and Indemnification of Parties.” Luck Stone cannot be solely responsible unless they are the sole owner of the property being remapped. Revise accordingly.

Applicant Response: Revised as suggested.

11. SPEX plat 2009-0027 (Sheet 1, note #26) references widening of Gant Lane. Staff suggests adding a proffer to address this dedication.

Applicant Response: Revised as suggested [see proposed Condition 22].

12. Staff requests the opportunity to review the proffers again.

Applicant Response: A revised draft copy of the Proffer Statement is included for Staff’s review.

SPEX 2009-0027, Quarry Use Issue

1. Parcel 61/9A (PIN 152-26-8334), owned by the Town of Fairfax, should be included as part of this application, since approximately 1/3 of the property is delineated in the shaded vicinity map. Update the table below the vicinity map, the owners’ information, General Note #1, and the Statement of Justification. Note: currently the acreage is incorrect, however, with the addition of the above parcel, the acreage could be correct. Staff will check this at next submission.

Applicant Response: Revised as requested.

Plat

1. Throughout the plat, remove the “+/-“ before the acreage.

Applicant Response: Revised as requested.

2. General Note #5, per Section 3-1003(GG), include in the note “when conducted on the same property” after “Crushing, treating, washing and/or processing of materials, accessory to a quarry operation”.

Applicant Response: Revised as requested.

3. General Note #11, include “Section 4-1500.”

Applicant Response: Revised as requested.

4. General Note #26, update the note to ‘SPEX 2010-0013”.

Applicant Response: Revised as requested.

5. Sheet 1, the table under the Vicinity Map, correct the PIN number for parcel 61-15 (PIN: 153-35-5865).

Applicant Response: Revised as requested.

6. Sheet 1, under Sheet Index, delete 1:500 after Sheet 3 “Aerial Overlay” to have consistent titles.

Applicant Response: Revised as requested.

7. Sheet 4 & 5, label the limits of SPEX to be consistent with the vicinity map.

Applicant Response: Revised as requested.

8. Sheet 8, update note #2 to include SPEX 2010-0013.

Applicant Response: Revised as requested.

Statement of Justification

1. As noted above, include parcel 61/9A (PIN 152-26-8334) in the discussion for the SPEX.

Applicant Response: MCPI 152-26-8334 is referenced throughout the Statement of Justification with the total acreage distinguished from the acreage included within the limits of special exception.

2. Sheet 3, in the paragraph above the table, there are six properties not five.

Applicant Response: Revised as requested.

3. Sheet 6, the second paragraph, "Luck Stone is also proposing that the western boundary of the quarry pit wall be automatically permitted to extend west in the future should property to the west become zoned MR-HI or PD-GI". A new SPEX and possibly ZCPA will need to be processed for expansions to the quarry.

Applicant Response: Acknowledged.

Conceptual Description of Proposed Operations & Evaluation of Feasibility of Operations without Hazards or Damage to Other Properties

1. Page 3, Clarify the triggers for the monitoring of both surface water and groundwater – when will this start?

Applicant Response: Monitoring will be initiated one year prior to the start-up of any ground disturbance associated with the quarry activity and will continue during the active use of the quarry. Specific monitoring intervals will be provided within a proposed Monitoring Plan which will be presented as an Appendix within the Detailed Hydrogeologic Report. The Conceptual Description of Proposed Operations & Evaluation of Feasibility of Operations without Hazards or Damage to Other Properties has been updated to reflect this information.

2. Page 3, for long term groundwater monitoring, seismic monitoring program and land-disturbing activities, clarify when will these activities start, who does the report go to and how often will they be monitored?

Applicant Response: Groundwater Monitoring will be initiated one year prior to the start-up of any ground disturbance. Monitoring reports will be submitted to the Office of Building and Development on a planned monthly basis during the first year. Specific monitoring intervals along with

proposed monitoring points will be provided within a proposed Monitoring Plan which will be presented as an Appendix within the Detailed Hydrogeologic Report. The Conceptual Description of Proposed Operations & Evaluation of Feasibility of Operations without Hazards or Damage to Other Properties has been updated to reflect this information.

Other

1. Staff requests reviewing the SPEX conditions.

Applicant Response: Luck Stone has provided to Staff a series of suggested conditions based upon prior approvals associated with SPEX 1999-0006 (Luck Stone Leesburg Plant) and SPEX 2002-0016 (Bull Run Quarry).

2. Staff suggests requesting an extension to the validity of the SPEX. This should be included in the SPEX conditions.

Applicant Response: Luck Stone has provided to Staff a series of suggested conditions based upon prior approvals associated with SPEX 1999-0006 (Luck Stone Leesburg Plant) and SPEX 2002-0016 (Bull Run Quarry). Luck Stone has proposed that SPEX 2009-0027 remain valid for a period of 40 years from the date of approval [see proposed Condition 40].

**SPEX 2010-0013, Tunnel, 1st Referral
Plat**

1. In the title, title bar, vicinity map, General Note #4 change SPEX 2010-XXXX to SPEX 2010-0013.

Applicant Response: Revised as requested.

2. General Note #4, remove the “+/-” before the acreage.

Applicant Response: Revised as requested.

3. General Note #5, since the acreage of each parcel is included, change “property” to “the Special Exception area is currently zoned MR-HI (21.97 AC) and PD-GI (8.80 AC) subject to the Revised 1993 Loudoun County Zoning Ordinance. The PD-GI portion is proposing to be remapped to MR-HI with ZMAP-2009-0003.”

Applicant Response: Revised as requested.

4. General Note #10, include per Section 4-1500.

Applicant Response: Revised as requested.

5. General Note #15, the 300' no-build buffer is only shown on the tunnel area not all along the Goose Creek. Expand this to all of Goose Creek.

Applicant Response: Revised as requested.

6. The table below the Vicinity Map, under Proposed Zoning, remove ZMAP 2009-0004.

Applicant Response: Revised as requested.

7. Per Section 6-1300(G), (H), (M), & (N), staff defers to the Environmental Review Team (ERT).

Applicant Response: Acknowledged

**LOUDOUN COUNTY OFFICE OF TRANSPORTATION SERVICES; COMMENTS
PERTAINING TO ZMAP 2009-0003, 2009-0004 & SPEX 2009-0027 (GEORGE
PHILLIPS 7/22/2010)**

1. Initial Staff Comments (First Referral January 27, 2010): Clarification is needed regarding information in the Applicant's traffic statement. First, in the trip generation table (*Table 1*), only the P.M. peak hour data was provided. Please provide the A.M. peak hour data for the quarry and clarify how the peak hour LOS was calculated. Second, it needs to be clarified how the existing peak hour count data provided in *Tables 3 and 4* relate to the trip generation table (*Table 1*). The numbers appear to be different. Third, *Table 3* includes P.M. peak hour count data for Luck Lane but does not provide the peak hour count data for Jackpit Lane and Builders Lane/Belmont Station Drive.

Current Issue Status: The Applicant's traffic statement now includes the trip generation in the AM peak period traffic for the Luck Stone quarry in *Tables 2 and 3*, along with information as to how these figures were calculated. In addition, *Table 8* shows the corrected turns and the peak hour counts for Jackpit Lane and Builders Lane. Issue resolved.

Applicant Response: Acknowledged.

2. Initial Staff Comments (First Referral January 27, 2010): One page 2 of the Applicant's traffic statement, it is noted that, for quarry uses on the parcels west of Goose Creek which are the focus of these applications, Luck Stone will transport rock material across

Goose Creek on-site to the east side of Goose Creek for processing at the existing facility adjacent to Belmont Ridge Road (Route 659). No truck traffic for rock extraction operations is proposed via Cochran Mill Road (Route 653). Under the proposed special exception, the Applicant proposes to construct a tunnel below the existing grade of Goose Creek rather than the approved conveyor belt bridge over Goose Creek (see *Attachment 4* in the first OTS referral). Please clarify that all employees and equipment accessing the parcels west of Goose Creek will not utilize Cochran Mill Road (Route 653) and Gant Lane (Route 652) and access exclusively via Belmont Ridge Road. Given the condition of Cochran Mill Road (Route 653) and Gant Lane (Route 652), OTS recommends that all vehicle access for the proposed quarry uses be via Belmont Ridge Road (Route 659) and stipulated in the rezoning proffers and/or Special Exception Conditions. Also, the specific design of the proposed underground tunnel connection needs to be better understood, including its width and specific construction standards being applied.

Current Issue Status: The Applicant has adequately clarified that the proposed private street entrance on Cochran Mill Road (Route 653) will not be used for transporting quarried rock. The entrance will provide maintenance and employee access for Luck Stone as well as the proposed Water Treatment Plant and the amount of site traffic will be relatively low. OTS believes that the new road will provide improved access to the site by avoiding the existing substandard Gant Lane (Route 652) bridge crossing over Sycolin Creek. Please note, however, that the proposed private road with entrances onto Cochran Mill Road (Route 653) and Gant Lane (Route 652) will require review and approval by the Department of Building and Development and VDOT and must meet applicable standards; further discussion of the design of the proposed road with these agencies is recommended by OTS. As noted in the OTS comments on the Water Treatment Plant (dated June 29, 2010), this road is recommended to be completed in time to allow for construction access to the water treatment plant.

Applicant Response: It is anticipated that the new private road crossing of Sycolin Creek will be completed upon occupancy of the water treatment plant based on current construction schedules for the plant and Luck Stone's access needs relative to future mining operations. It is acknowledged that a VDOT entrance permit will be necessary for the connection to Gant Lane.

The issue of construction traffic associated with the Water Treatment Plant utilizing Gant Lane has been discussed with VDOT subsequent to this referral comment. The Gant Lane culvert crossing of Sycolin Creek is 14 feet wide and consists of a single, standard 12-foot lane. The crossing was inspected as recently as 2009 and it received an acceptable rating. No weight limits have been posted at the crossing. While the crossing is a one-lane structure, its width is considered satisfactory for construction vehicles destined for the proposed water treatment plant. VDOT has not identified an issue with the crossing. If VDOT deems necessary, these considerations

can be addressed at the time of application for the entrance permit. In light of the one-lane condition of the crossing, the Applicant will agree that a traffic control plan will be in place to manage traffic flow along Gant Lane when construction traffic to the water treatment plant site is anticipated.

3. Initial Staff Comments (First Referral January 27, 2010): On page 6 of the traffic statement, it is noted that the installation of a traffic signal at the Belmont Ridge Road (Route 659)/Luck Lane intersection will improve the Level-of-Service to LOS D but that it is not warranted based on the Manual on Uniform Traffic Control Devices (MUTCD) warrants. The Applicant needs to provide the MUTCD warrant findings. Please note that the conditions from SPEX 1990-0019 (Condition #1) call for a signal contribution when warranted. In addition, CTP Policy states that LOS D or better be maintained. Further discussion is needed as to how this inadequate LOS can be improved. Current Issue Status: The Applicant has adequately documented that peak hour warrants for a traffic signal are not met. However, no recommendations have been made which address the side street deficiencies (below LOS D) for left-turning site traffic onto northbound Route 659. In addition, OTS continues to recommend that the Applicant provide turn lanes on Route 659 into the site entrance at Luck Lane, subject to VDOT review and approval. See also Comment #4 below.

Applicant Response: While construction of a left turn lane would improve operations at the entrance, additional review of the geometrics, sight distance, and existing utilities and evaluation of multiple construction scenarios have indicated that installation of a separate left turn lane on northbound Belmont Ridge Road that would meet current VDOT design requirements at a 50 mile per hour design speed would require significant turn lane transition lengths extending far south of the existing Luck Stone entrance, could worsen the sight distance characteristics of the existing facility, force the removal of a significant stand of trees in the open space common area presently owned by Belmont Forest/Belmont Greene Community Association, and require the acquisition of off-site right-of-way, water, and gas easements. Additionally, a field review of the intersection indicates that the addition of a northbound left-turn pocket would likely be more dangerous for northbound left turns from Luck Lane and could actually reduce the operability of the intersection.

Importantly, since these requested improvements are not associated with the planned VDOT widening of Route 659, any construction would be abandoned with the ultimate Route 659 widening. The most significant concern is the sight distance associated with the tight horizontal curve located south of Luck Lane and the limited vertical sight distance through the curve for passenger vehicles. Presently, this curve is posted with a 35 mile per hour advisory speed limit, but the VDOT minimum design requirements are based on the regulatory speed at 45 miles per hour.

Therefore, adding a left turn lane on northbound Route 659 may require reconstruction of the grades to maintain stopping sight distance, so interim short turn lane construction would still require significant road improvements, even if right-of-way were made available.

The Applicant has reviewed Staff's request in light of the significant costs associated therewith, and notes that this application does not change the land uses or traffic volumes on Route 659. Even if all existing Luck Stone trips are considered "new" trips, the peak hour traffic volumes at the three existing Luck Stone driveways along Route 659 comprise approximately 12 percent of the a.m. and four percent of the p.m. roadway peak hour volumes. Accordingly, the Subject Property's impacts remain below the typical impact threshold of 15 percent (at which point users notice a change in traffic flow) and below which significant transportation commitments should be made. Additionally, the Applicant notes that, insofar as safety statistics are concerned, information obtained from the Loudoun County Sheriff's Office indicates the occurrence of three "angle" accidents at this intersection over the past three years.

Notwithstanding the foregoing and, subject to VDOT approval and acquisition of any necessary easements, the Applicant can commit to a right turn lane at the Luck Lane/Route 659 intersection, the installation of an advance flashing warning signal, and reduced 35 miles per hour speed limit signs along Route 659 in the vicinity of the Luck Entrance. Additionally, subject to permission by the owner of MCPI #152-29-1504 and securing a permanent sight distance easement from said owner, the Applicant shall clear any trees/vegetation located on the inside of the existing curve (on the east side of Route 659), as suggested in the VDOT referral to improve sight distance issues in the vicinity of the intersection [see proposed Condition 10]. The Applicant will continue to work with VDOT to address sight distance and turn lane issues. The Applicant will continue to coordinate with VDOT in providing adequate and safe access to Luck Stone's Route 659 entrance.

4. Initial Staff Comments (First Referral January 27, 2010): While a left-turn lane is warranted on northbound Belmont Ridge Road (Route 659) onto Luck Lane, the Applicant notes that it is not recommended because the proposed uses are the same as the existing condition and that Belmont Ridge Road (Route 659) is programmed for realignment. Please note that the conditions from SPEX 1990-0019 (Condition #2) call for the installation of turn lanes at the site entrance in coordination with the "planned relocation and reconstruction of Route 659". However, Belmont Ridge Road (Route 659) is not anticipated to be improved in the near future. As a two-lane facility without turn lanes, the existing traffic accessing the quarry creates friction on Belmont Ridge Road (Route 659) which impedes through traffic flow. In addition, the potential for rear-end collisions is increased. The CTP calls for turn lanes at all intersections on Route 659.

OTS recommends that right- and left-turn lanes be provided by the Applicant on Route 659 at Luck Lane which meet VDOT standards. Current Issue Status: OTS understands that the previous conditions of approval for Luck Stone under SPEX 1990-0019 reference the provision of turn lanes only as part of the Route 659 widening. However, as previously noted, Route 659 is not anticipated to be widened in the near future, and the CTP calls for turn lanes at all intersections on Route 659. Therefore, OTS continues to recommend that right- and left-turn lanes be provided by the Applicant on Route 659 at Luck Lane subject to VDOT review and approval.

Applicant Response: While construction of a left turn lane would improve operations at the entrance, additional review of the geometrics, sight distance, and existing utilities and evaluation of multiple construction scenarios have indicated that installation of a separate left turn lane on northbound Belmont Ridge Road that would meet current VDOT design requirements at a 50 mile per hour design speed would require significant turn lane transition lengths extending far south of the existing Luck Stone entrance, could worsen the sight distance characteristics of the existing facility, force the removal of a significant stand of trees in the open space common area presently owned by Belmont Forest/Belmont Greene Community Association, and require the acquisition of off-site right-of-way, water, and gas easements. Additionally, a field review of the intersection indicates that the addition of a northbound left-turn pocket would likely be more dangerous for northbound left turns from Luck Lane and could actually reduce the operability of the intersection.

Importantly, since these requested improvements are not associated with the planned VDOT widening of Route 659, any construction would be abandoned with the ultimate Route 659 widening. The most significant concern is the sight distance associated with the tight horizontal curve located south of Luck Lane and the limited vertical sight distance through the curve for passenger vehicles. Presently, this curve is posted with a 35 mile per hour advisory speed limit, but the VDOT minimum design requirements are based on the regulatory speed at 45 miles per hour. Therefore, adding a left turn lane on northbound Route 659 may require reconstruction of the grades to maintain stopping sight distance, so interim short turn lane construction would still require significant road improvements, even if right-of-way were made available.

The Applicant has reviewed Staff's request in light of the significant costs associated therewith, and notes that this application does not change the land uses or traffic volumes on Route 659. Even if all existing Luck Stone trips are considered "new" trips, the peak hour traffic volumes at the three existing Luck Stone driveways along Route 659 comprise approximately 12 percent of the a.m. and four percent of the p.m. roadway peak hour

volumes. Accordingly, the Subject Property's impacts remain below the typical impact threshold of 15 percent (at which point users notice a change in traffic flow) and below which significant transportation commitments should be made. Additionally, the Applicant notes that, insofar as safety statistics are concerned, information obtained from the Loudoun County Sheriff's Office indicates the occurrence of three "angle" accidents at this intersection over the past three years.

Notwithstanding the foregoing and, subject to VDOT approval and acquisition of any necessary easements, the Applicant can commit to a right turn lane at the Luck Lane/Route 659 intersection, the installation of an advance flashing warning signal, and reduced 35 miles per hour speed limit signs along Route 659 in the vicinity of the Luck Entrance. Additionally, subject to permission by the owner of MCPI #152-29-1504 and securing a permanent sight distance easement from said owner, the Applicant shall clear any trees/vegetation located on the inside of the existing curve (on the east side of Route 659), as suggested in the VDOT referral to improve sight distance issues in the vicinity of the intersection [see proposed Condition 10]. The Applicant will continue to work with VDOT to address sight distance and turn lane issues. The Applicant will continue to coordinate with VDOT in providing adequate and safe access to Luck Stone's Route 659 entrance.

5. Please confirm that the 35-foot ROW dedication and the provision of associated easements proffered with ZMAP 1999-0004 along the site's Cochran Mill Road (Route 653) frontage carry forward with the current applications.

Applicant Response: Confirmed [see proposed Condition 11].

6. New Comment-SPEX 2010-0013 (Tunnel): OTS defers to the Department of Building & Development regarding technical review of the proposed tunnel under Goose Creek. OTS has no further comments on this matter.

Applicant Response: Acknowledged.

7. The Office of Transportation Services has no recommendation at this time. A recommendation will be provided once the outstanding issues identified in this referral are addressed by the Applicant. OTS staff is available to meet with the Applicant for further discussion of these applications.

Applicant Response: Acknowledged.

**LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT –
ENVIRONMENTAL REVIEW TEAM; COMMENTS PERTAINING TO ZMAP 2009-
0003, ZMAP 2009-0004, AND SPEX 2009-0027 (WILLIAM MARSH, 7/12/2010)**

General Comments

1. Staff recommends collaboration with Loudoun Water, Luck Stone, Green Energy Partners, and to the Town of Leesburg to coordinate location of utility lines supporting the Loudoun Water project and any extension from the Town of Leesburg waste water facility that is related to a power plant application. Locating any proposed reclaimed water utility along the proposed road connecting Cochran Mill Road and Gant Lane may be an option worth considering. County staff is available to facilitate a joint meeting of all parties if requested.

Applicant Response: Loudoun Water and Luck Stone have coordinated relative to the location of utility lines supporting the Loudoun Water project and anticipate that there will be additional opportunities to co-locate quarry-related activities with other utilities that must be extended to the water treatment plant as both are developed. The special exception plat shows limits of disturbance line for the water treatment plant, the access road and the finished water line. Except for areas where the raw water line will cross under Goose Creek and under adjacent Revised General Plan-recommended “no-build” buffer areas shown on the Special Exception Plat, the line will be located outside of the buffers and within areas to be cleared for the proposed quarry to the north, and it will avoid the expanded no-build buffer on the water treatment plant parcel. Additionally, to the extent possible, Loudoun Water has co-located the raw water line easement within the electric transmission line easement in order to extend the line southward from the Potomac River. The water line, however, must change direction and veer off the easement so as to run eastward toward the Quarry A water storage facility.

2. The long term, significant net loss of green infrastructure due to both applications is an unresolved concern. Neither Applicant has committed to any reforestation or other habitat enhancement to compensate for lost forest canopy and disturbed or fragmented habitat, beyond meeting minimum requirements for federal and state permits.

Applicant Response: The Applicant disagrees that the proposed quarry will result in a significant net loss of “Green Infrastructure” and that the Applicant’s efforts to date only go to meet minimum requirements for federal and state permits. First, from a policy interpretation perspective, the plain meaning of Chapter 5 of the Revised General Plan categorizes “Mineral Resource Extraction Activities” as a “Geologic and Soil Resource” of the County’s “Group 1: Natural Resource Assets,” which is specifically

defined as “Green Infrastructure.” The Applicant asserts that this application’s implementation of the Revised General Plan’s Green Infrastructure policies cannot be interpreted as generating a significant loss of green infrastructure.

Second, the Applicant has committed to significant reforestation of the Subject Property following cessation of mineral extraction activities as noted with the Reclamation Plan narrative and Sheet 7 of the Special Exception Plat [see proposed Condition 22]. This reforestation and future lake use is also shown on the previously-provided “Green Infrastructure Plan” on Sheet 8 of the Special Exception Plat, which depicts proposed open space and tree save areas on the Subject Property.

While there may be loss of tree canopy in the short term, the proposed quarry use will result in significant reforestation at the conclusion of quarrying activities on the Subject Property. Following cessation of mineral extraction activities, the entire Subject Property is currently envisioned to be permanently preserved either as private or public open space uses as forest and a body of water/water impoundment/water storage.

A minimum of 137.7 acres will be preserved as permanent open space in the short-term, and includes the Revised General Plan’s RSCOD buffer, a Scenic Creek Valley Buffer associated with Sycolin Creek, as well as the Revised General Plan’s 300-foot no build buffer adjoining Goose Creek. Approximately 88 acres of existing forest cover is planned to be preserved within this open space. This forest preservation area alone is equivalent to 20 percent of the Subject Property. Additionally, the Applicant will reforest approximately 3.5 acres along the Sycolin Creek floodplain to enhance those areas devoid of vegetation as depicted on sheets 5, 6, 7, & 8 of SPEX 2009-0027 [see proposed Proffer ILD]. Additionally, there exist plans for Luck Stone to restore and reforest a portion of Sycolin Creek upstream of the Washington and Old Dominion trail. The stream reach proposed for this restoration project flows through one of the lightly forested areas along the creek.

Long term, an additional 132 acres are planned for open space preservation and reforestation. These areas include the overburden placement area (±50-acres), the operation road areas (±25-acres), lightly forested areas within Sycolin Creek’s floodplain (±7.5 acres) and the developable land area northwest of Sycolin Creek which has been placed into open space subject to a future ZCPA (±50-acres).

Once activity on overburden areas has ceased, the overburden placement areas outside of established water line easements will be stabilized and

seeded with grasses, planted with trees and reforested, thereby returning it to a condition that most closely approximates its current condition. Additionally, all gravel operations roads outside of established waterline easements will be scarified, top-dressed with topsoil, limed, fertilized, and seeded so as to remove traces of any former industrial uses.

The resulting tree canopy and lake comprise an open space benefit in excess of the current site conditions, much of which are devoid of tree canopy, are used for agriculture and have, until recently, been used for outdoor recreation purposes.

SPEX-2009-0027 and SPEX-2010-0013 Luckstone Quarry Expansion and Tunnel

3. Staff has reviewed a plan for the proposed tunnel under Goose Creek. Due to the fact that Goose Creek will be flowing on what is essentially a man-made aqueduct, staff recommends that a contingency plan be worked out with the Applicant to enable the base flow of Goose Creek to be sustained if there is a collapse or significant fractures of the proposed tunnel. Staff further encourages consideration of a flow gage on Goose Creek to monitor base flow downstream of the tunnel, which could be used as a measure to activate the contingency plan.

Applicant Response: The Applicant has provided a stability report and technical contingency memorandum prepared by Dr. G. Sauer Corporation. As noted in the report, the tunnel contingency plan anticipates a series of potential scenarios, including excess groundwater ingress into the tunnel. Groundwater will be continually monitored by measuring channeled water towards trenches at either side of the tunnel excavation. At regular intervals, sump pumps will be installed to transport the water to a discharge pipe equipped with a flow meter to measure water infiltration, which will provide an accurate measurement of the tunnel's impact on Goose Creek.

Recording a measurement of the flow of water infiltrating the tunnel is a more practical and accurate method of assessing the proposed tunnel's effect on the Goose Creek for determining whether or not a contingency plan should be activated than utilizing measurements from a flow gauge on the Goose Creek as such water levels—including base water levels—and the resulting flow within Goose Creek, will vary greatly based on seasonal conditions and precipitation events. Measuring water flow leaving the tunnel will be easily measured and used to assess increases in infiltration. As noted in the report and contingency plan, the likelihood of seepage or other significant damage from Goose Creek is minimal given the depth of the proposed tunnel and the structural stability of the diabase rock.

4. Attached is correspondence from September 2006 indicating the presence of wood turtles on or near the project area. This correspondence may not have been taken into account with the June 10, 2010, wood turtle habitat evaluation. Staff recommends that the Applicant coordinate with state agencies like the Department of Environmental Quality (DEQ), Department of Conservation and Recreation (DCR), and Department of Game and Inland Fisheries (DGIF) about this correspondence. Staff also supports the recommendations on page 2 of said correspondence.

Applicant Response: The information contained in the September 2006 correspondence from Wetland Studies and Solutions, Inc. (“WSSI”) was considered by WSSI prior to conducting the wood turtle habitat evaluation and survey in February and June 2010, as described in WSSI’s report, dated June 10, 2010. The study area encompassed all suitable habitats along Goose Creek and Sycolin Creek within the Luck Stone property. Further, the entire length of the Sycolin Creek bed and banks on the Subject Property was evaluated in February 2010, when any turtles present would be expected to be in their winter hibernacula.

The Sycolin Creek study area included the area where the individual wood turtle was found in 2005. The study area was searched again in June 2010, focusing on the floodplain on both sides of Goose Creek. This search was conducted when any turtles present would be expected to be along the floodplain of Goose Creek, since wood turtles are known to oversummer in the floodplains of their wintering streams. Although suitable summer and winter-phase wood turtle habitat was documented within the study area along Sycolin Creek and Goose Creek (including Goose Creek Reservoir), no wood turtles were observed during the investigation.

Furthermore, based on photographs of the wood turtle documented in 2005, the condition of the shell suggests the turtle was an old specimen. Thus, it is WSSI’s opinion that this turtle is no longer present, which is consistent with the findings documented in WSSI’s report. In addition, it has been documented that much of Sycolin Creek and Goose Creek have poor water quality and degraded habitat [as described in the 2008 Virginia Department of Environmental Quality (DEQ) 305(b)/303(d) Integrated Water Quality Report], thus decreasing the likelihood of a viable population. Lastly, Northern Virginia is at the southern boundary of the wood turtle’s range, and the nearest wood turtle record is over 7 miles away from the Luck Stone Quarry project.

Accordingly, based on the results of the study, the probability that the Luck Stone Quarry project area supports a viable population of wood turtles is low. In addition, according to the Virginia Department of Game and Inland Fisheries records, there is no documentation (notwithstanding the find in

2005) of wood turtles anywhere in the Sycolin Creek or Goose Creek watersheds.

However, and, as noted in the Applicant's May 6, 2010 response letter, if any wood turtles are found, Luck Stone will notify all contractors working on the Subject Property about the potential to encounter wood turtles and to undertake a "sweep" of potential habitat areas prior to initiation of construction. The Applicant will also distribute a flyer prepared by the Virginia Department of Game and Inland Fisheries that includes photos and a description of wood turtles that is distributed to all site workers. Any wood turtles located during such a sweep will be relocated to a suitable area along Sycolin Creek or Goose Creek. Additionally, Luck Stone will comply with all federal, state, and local laws governing endangered species. Upon determination by the appropriate federal or state authority that rare species/communities exist, Luck Stone will evaluate the portion of the site not impacted by mining as a possible mitigation area prior to disturbance [see proposed Condition 43].

5. Regarding existing and proposed road crossings of Sycolin Creek:

- Staff recommends a condition of approval for removing the existing, low water crossing of Sycolin Creek in conjunction with completing the proposed crossing that connects Cochran Mill Road to Gant Lane.

Applicant Response: The Applicant is amenable to a condition of approval requiring the removal of the existing farm lane bridge over Sycolin Creek upon completion of the proposed permanent Cochran Mill/Gant Lane private bridge [see proposed Condition 7].

- As depicted, the proposed road crossing will disturb mature, hardwood forest canopy, leaving a pocket of canopy in the floodplain between the road crossing and the electric transmission line. Staff recommends the following: depict proposed intersections with Cochran Mill Road and Gant Lane completely outside of the transmission easement on the Concept Development Plan to avoid possible easement conflicts. Second, adjust the road alignment to align with or encroach into the eastern edge of the transmission easement.

The intent of these recommendations is to respect existing easements while also minimizing net loss and fragmentation of green infrastructure.

Applicant Response: The Applicant has provided a new alignment closer to the Dominion Power ("Dominion") easement that minimizes intrusion into the easement and crosses at a 45-degree angle. This road alignment was

selected as the optimum location and was preferred to specifically minimize disturbance of wetlands, steep slopes, and floodplain.

The Applicant notes that, under the existing Dominion right-of-way easement recorded in Deed Book 437 at Page 355, granted by Luck Stone's predecessors in interest, Luck Stone is prohibited from constructing any roads on the existing Dominion right-of-way except where such roads do not interfere with the construction, operation, or maintenance of Dominion's facilities, and where such road crosses at a 45 degree angle. The easement agreement vests in Dominion the right to keep the right-of-way clear of all buildings or structures which, in the sole opinion of the company, constitute a hazard to or may endanger the safe and proper operation of its facilities.

The proposed road, while planned to be a private access road, may ultimately serve as a public road in the distant future and, as such, the Applicant has designed the proposed road to provide for sufficient curvature, design speed, sight distance, and access points commensurate with VDOT standards. Luck Stone's internal investigation and discussions with Dominion representatives over the past two months have revealed that Dominion will not permit either the construction of a parallel road within their easement area or any encroachment which does not cross at a 45-degree angle.

The new alignment of the proposed road was selected to minimize necessary clearing of existing tree canopy while allowing for a reasonable separation between the proposed roadway and Dominion's easement for safe operation and construction. Approximately 2.4 acres of existing tree canopy is expected to be disturbed by construction of the road. To offset this loss, the Applicant will reforest approximately 3.5 acres along the Sycolin Creek floodplain to enhance those areas devoid of vegetation as depicted on sheets 5, 6, 7, & 8 of SPEX 2009-0027 [see proposed Proffer II.D].

6. Staff recommends a condition of approval for turbidity testing of runoff leaving erosion and sediment control structures after storm events. If turbidity levels exceed 280 nephelometric turbidity units (ntu), appropriate measures will be taken at sediment basins and traps to lower the ntu level. This recommendation is consistent with standards agreed to by Green Energy Partners (SPEX-2009-0009).

Applicant Response: Luck Stone and Loudoun Water are interested in water quality and have long recognized the need for measures which address water quality impacts on Goose Creek. In 2003, Loudoun Water, in cooperation with the City of Fairfax, took the initiative to fund and complete a two-volume document entitled the Goose Creek Source Water Protection Program ("GCSWPP"). This document was the culmination of a systematic process that looked at a multiple barrier approach to minimizing threats to

public health. Goals for the program were developed to address multiple levels of protection for the drinking water supply. The process leading up to the final document involved extensive coordination with multiple stakeholders. It provided the opportunity for all parties to be fully informed as to the reason why additional water quality measures needed to be implemented and it suggested a series of source water protection tools that could be used to protect the drinking water supply.

In accordance with GCSWPP recommendations, Luck Stone can committing to Low Impact Development (“LID”) features in the development of the proposed quarry, the most significant of which is a commitment to a reclamation plan that includes extensive buffers along Goose Creek. Other likely techniques include water quality swales adjacent to internal roadways, rain gardens, and bioretention areas. Luck Stone is also willing to implement any new standards and regulations that have been adopted by the State and by Loudoun County Board of Supervisors, but is reluctant to commit to proposals that have not been evaluated through the type of professional and public review that is normally part of the legislative adoption process.

Luck Stone will therefore obtain and comply with the requirements of a Virginia Stormwater Management Program permit from the Virginia Department of Conservation and Recreation, will comply with the Loudoun County Erosion and Sediment (“E&S”) Control Ordinance including the additional E&S requirements of FSM 5.320.D.7.b.v., and will implement water quality measures consistent with the requirements of the Loudoun County FSM, the Goose Creek Source Water Protection Manual, and the Virginia Stormwater Management Handbook. As these state and local regulations are modified to address turbidity, runoff capture and solids removal as identified in the first and third bullet point, Luck Stone will comply accordingly.

In an effort to bolster erosion and sediment control, the Applicant proposes to utilize a reinforced "super silt fence" and stabilization matting in select areas to control sediment runoff from the Subject Property [see proposed Condition 42]. A “super silt” fence includes a chain link fence, galvanized piping, and synthetic filter fabrics which greatly improves sediment retention, without collapse or blowout (as regularly seen with most standard silt fences) and provides minimal vegetation disturbance. The metal backing gives the fence increased strength to resist the weight of soil and water which may be trapped by the fence in a large drainage area, and also discourages construction site operators from driving vehicles over the fence. Given that the land disturbing activities will be located more than 300 feet from Goose Creek, space will be available to implement adequate erosion and sediment

(permanently)

design and Best Management Practices (“BMPs”) techniques. No outfalls are planned to occur upstream of the Goose Creek Reservoir.

ZMAP-2009-0003 and -0004 Loudoun Water/Luckstone

7. Staff encourages both Applicants to consider habitat enhancement within lightly forested areas of the Sycolin Creek major floodplain located between Gant Lane and the Washington and Old Dominion trail crossing. As previously noted, staff commends Luck Stone for plans to restore the Sycolin Creek channel and overbank adjacent to the trail crossing. Implementing this recommendation would help address general comment 2.

Applicant Response: The Applicant will reforest approximately 3.5 acres along the Sycolin Creek floodplain to enhance those areas devoid of vegetation as depicted on sheets 5, 6, 7, & 8 of SPEX 2009-0027 [see proposed Proffer II.D]. Additionally, as previously referenced, there exist plans to restore and reforest a portion of Sycolin Creek upstream of the Washington and Old Dominion trail. The stream reach proposed for this restoration project flows through one of the lightly forested areas along the creek.

Additionally, the Applicant reiterates that a minimum of 137.7 acres will be preserved as permanent open space in the short-term, and includes the Revised General Plan's RSCOD buffer, a Scenic Creek Valley Buffer associated with Sycolin Creek, as well as the Revised General Plan's 300-foot no build buffer adjoining Goose Creek. Approximately 88 acres of existing forest cover is planned to be preserved within this open space. This forest preservation area alone is equivalent to 20 percent of the Subject Property.

Long term, an additional 132 acres are planned for open space preservation and reforestation. These areas include the overburden placement area (±50-acres), the operation road areas (±25-acres), lightly forested areas within Sycolin Creek's floodplain (±7.5 acres) and the developable land area northwest of Sycolin Creek which has been placed into open space subject to a future ZCPA (±50-acres).

Once activity on overburden areas has ceased, the overburden placement areas outside of established water line easements will be stabilized and seeded with grasses, planted with trees and reforested, thereby returning it to a condition that most closely approximates its current condition. Additionally, all gravel operations roads outside of established waterline easements will be scarified, top-dressed with topsoil, limed, fertilized, and seeded so as to remove traces of any former industrial uses.

The resulting tree canopy and lake comprise an open space benefit in excess of the current site conditions, much of which are devoid of tree canopy, are used for agriculture, and have, until recently been used for outdoor recreation purposes.

**LOUDOUN COUNTY PARKS, RECREATION AND COMMUNITY SERVICES;
COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-0027, and SPEX 2010-0013 (BRIAN FULLER, 7/15/2010)**

1. PRCS is developing a system of interconnected linear parks along the County's Stream Valley Corridors. This is consistent with the Greenways and Trail Policies of the Revised General Plan, Policy 1 (p. 5-39): "*Greenways include areas along rivers and streams that are often ideal for trails*". Policy 4 (p. 5-40): "*The County will seek through purchase, proffer, density transfer, donation or open-space easement, the preservation of greenways and the development of trails*". Parks, Recreation and Community Services Policies, Policy 3 (p. 3-15): "*The County encourages the contiguous development of regional linear parks, trail, and natural open space corridors to provide pedestrian links and preserve environmental and aesthetic resources.*" In previous verbal discussions, Luck Stone Corporation has been willing to provide trail connections along Goose Creek, and Staff hopes this proposal will not reverse Luck Stone's willingness to provide the trail section.

As a Condition of Approval, PRCS requests that the Applicant consider dedicating the proposed area for the "300-foot Permanent Conservation Easement" to the County for the purposes of a linear park along Goose Creek. This project property is vital for extending a trail along Goose Creek to connect with established portions of the Potomac Heritage National Scenic Trail and its trailhead at Keep Loudoun Beautiful Park downstream.

Should the Applicant not be willing to dedicate the property, PRCS requests a condition that the Applicant construct a 4-foot wide natural trail within a 30-foot wide public access easement along Goose Creek within the 300-foot buffer, to be field located by PRCS Staff. This would be consistent with previously-approved applications along Goose Creek, such as Play to Win Sports (SPEX 2007-0056).

Applicant Response: *The Applicants commit to the Plan recommended 300-foot no-build buffer area along the Application Property's frontage with Goose Creek.*

Issue Status: Unresolved. Staff requests that I.C more closely match Proffer I.2 as proposed with ZMAP 2009-0004, and to include the trail to be located on existing Parcels 153-35-5965, 152-16-8431, 152-26-8334, 152-27-4798, and 152-36-1675. While Staff appreciates the Applicant's commitment to "a future trail within the buffer parallel to Goose Creek" within Proffer I.2, Staff requests that the additional following language be added to the proffer: "*The future trail will be dedicated within a public access easement*

at the request of the County to serve as a connection to the Potomac Heritage National Scenic Trail. The ultimate location of the trail centerline will be field located by Department of Parks, Recreation and Community Services Staff." As previously stated by Staff, this trail will be a vital connection to the Potomac Heritage National Scenic Trail, as well as to a future trail section to be provided south (upstream) by Loudoun Water along their proposed water treatment plant..

Applicant Response: The Applicant will commit to providing a public access easement for a Goose Creek natural hiking trail for pedestrians within the proposed "no-build" buffer following the cessation of quarrying activities or sooner at the election of Luck Stone [see proposed Proffer II.B].

2. Staff requests the opportunity to explore potential recreational opportunities, within and around the quarry site with the Applicant, before and after quarry construction, such as non-motorized boating, fishing, hiking, and picnicking.

Applicant Response: Luck Stone is amenable to exploring potential recreational opportunities within and around the quarry site and appreciates staff's understanding that quarry safety during the construction and pendency of the proposed quarrying operation. Luck Stone understands Staff's desire to preserve the planned Quarry D for a future recreational amenity; this desire is consistent with the purpose of the MR-HI zoning district, which envisions the proposed quarry use as a "long term, but interim district," and recognizes that the proposed quarry can be converted "... to other compatible and beneficial uses consistent with the Comprehensive Plan." To the end, Luck Stone envisions that the quarry use will ultimately provide a public amenity once quarrying operations have ceased. However, given the extended timeframe for exhaustion of the planned quarry (perhaps as long as 100 years from the beginning of extraction), Luck Stone cannot commit to the creation of a public recreational amenity at this time, nor can it commit as to what recreational opportunities would be appropriate following the end of extraction activities.

Luck Stone is regulated by the Virginia Department of Mines, Minerals, and Energy ("DMME") under Chapter 16, Title 45.1, Articles 1-4 of the Code of Virginia (1950), as amended, and we have included a revised reclamation plan that meets DMME requirements. The (DMME) will require Luck Stone to follow reclamation standards as a precondition to the release of the quarry permit when mining operations have ceased, and these standards include provision for revegetation in areas that are capable of being regarded and resoiled. Revegetation will therefore be accomplished prior to implementation of the proposed water storage use.

Issue Status: Unresolved. Loudoun County Revised General Plan Mineral Resource Extraction Policy 9 (p.5-26) states that, "An application to permit the development of new quarries or the expansion of existing quarries will include a concept plan for the use of the site after extraction is complete."

PRCS understands that there is an unforeseeable end to the timeline for extraction opportunities within the proposed quarry expansion, but requests that the Applicant provide additional information behind what DMME requires for site stabilization and restoration. Furthermore, Staff supports the proposal for the quarry to be used by Loudoun Water for future water storage, and pre-treated water storage is a very compatible use for many passive recreational opportunities, such as fishing, non-motorized boating, and diving.

Applicant Response: The Applicant has committed to significant reforestation of the Subject Property following cessation of mineral extraction activities as noted with the Reclamation Plan narrative and Sheet 7 of the Special Exception Plat [see proposed Condition 22]. This reforestation and future lake use is also shown on the previously-provided “Green Infrastructure Plan” on Sheet 8 of the Special Exception Plat, which depicts proposed open space and tree save areas on the Subject Property.

While there may be loss of tree canopy in the short term, the proposed quarry use will result in significant reforestation at the conclusion of quarrying activities on the Subject Property. Following cessation of mineral extraction activities, the entire Subject Property is currently envisioned to be permanently preserved either as private or public open space uses as forest and a body of water/water impoundment/water storage.

A minimum of 137.7 acres will be preserved as permanent open space in the short-term, and includes the Revised General Plan’s RSCOD buffer, a Scenic Creek Valley Buffer associated with Sycolin Creek, as well as the Revised General Plan’s 300-foot no build buffer adjoining Goose Creek. Approximately 88 acres of existing forest cover is planned to be preserved within this open space. This forest preservation area alone is equivalent to 20 percent of the Subject Property. Additionally, the Applicant will reforest approximately 3.5 acres along the Sycolin Creek floodplain to enhance those areas devoid of vegetation as depicted on sheets 5, 6, 7, & 8 of SPEX 2009-0027 [see proposed Proffer II.D]. Additionally, there exist plans for Luck Stone to restore and reforest a portion of Sycolin Creek upstream of the Washington and Old Dominion trail. The stream reach proposed for this restoration project flows through one of the lightly forested areas along the creek.

Long term, an additional 132 acres are planned for open space preservation and reforestation. These areas include the overburden placement area (±50-acres), the operation road areas (±25-acres), lightly forested areas within Sycolin Creek’s floodplain (±7.5 acres) and the developable land area northwest of Sycolin Creek which has been placed into open space subject to a future ZCPA (±50-acres).

Once activity on overburden areas has ceased, the overburden placement areas outside of established water line easements will be stabilized and seeded with grasses, planted with trees and reforested, thereby returning it to a condition that most closely approximates its current condition. Additionally, all gravel operations roads outside of established waterline easements will be scarified, top-dressed with topsoil, limed, fertilized, and seeded so as to remove traces of any former industrial uses.

The resulting tree canopy and lake comprise an open space benefit in excess of the current site conditions, much of which are devoid of tree canopy, are used for agriculture, and have, until recently been used for outdoor recreation purposes. The Applicant commits that, within five years prior to the conclusion of quarrying activities on the Subject Property, the Applicant will present a refined Reclamation Plan further specifying anticipated end users, which may include use by the public [see proposed Condition 22].

3. Staff notes that the Applicant's Reclamation Plan states that it is difficult to commit to a specific viable end-use for the subject properties after quarry operations, but notes the opportunity for a potential recreation lake or public water reservoir. PRCS requests that should Loudoun Water not need the Quarry D expansion area for water impoundment, the Applicant commit to a Condition of Approval for the creation of a public recreational amenity in coordination with the Department of Parks, Recreation, and Community Services.

Applicant Response: As stated above, the Applicant appreciates staff's desire to preserve the planned Quarry D for a future recreational amenity and envisions that it will ultimately provide a public amenity once quarrying operations have ceased. Luck Stone is regulated by the Virginia Department of Mines, Minerals, and Energy ("DMME") under Chapter 16, Title 45.1, Articles 1-4 of the Code of Virginia (1950), as amended, and we have included a revised reclamation plan that meets DMME requirements. However, given the extended timeframe for exhaustion of the planned quarry (perhaps as long as 100 years from the beginning of extraction) as well as the introduction of new technologies and applications for quarry reuse in the coming decades, the Applicant cannot commit to the creation of a public recreational amenity at this time as the ultimate end-use of the quarry pit has not been determined.

Issue Status: Unresolved. Loudoun County Revised General Plan Mineral Resource Extraction Policy 9 (p.5-26) states that, "An application to permit the development of new quarries or the expansion of existing quarries will include a concept plan for the use of the site after extraction is complete."

PRCS understands that there is an unforeseeable end to the timeline for extraction opportunities within the proposed quarry expansion, but requests that the Applicant provide additional information behind what DMME requires for site stabilization and

restoration. Furthermore, Staff supports the proposal for the quarry to be used by Loudoun Water for future water storage, and pre-treated water storage is a very compatible use for many passive recreational opportunities, such as fishing, non-motorized boating, and diving.

Applicant Response: The Applicant has committed to significant reforestation of the Subject Property following cessation of mineral extraction activities as noted with the Reclamation Plan narrative and Sheet 7 of the Special Exception Plat [see proposed Condition 22]. This reforestation and future lake use is also shown on the previously-provided “Green Infrastructure Plan” on Sheet 8 of the Special Exception Plat, which depicts proposed open space and tree save areas on the Subject Property.

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seeded with grasses, planted with trees and reforested, thereby returning it to a condition that most closely approximates its current condition. Additionally, all gravel operations roads outside of established waterline easements will be scarified, top-dressed with topsoil, limed, fertilized, and seeded so as to remove traces of any former industrial uses.

The resulting tree canopy and lake comprise an open space benefit in excess of the current site conditions, much of which are devoid of tree canopy, are used for agriculture, and have, until recently been used for outdoor recreation purposes. The Applicant commits that, within five years prior to the conclusion of quarrying activities on the Subject Property, the Applicant will present a refined Reclamation Plan further specifying anticipated end users, which may include use by the public [see proposed Condition 22].

New Comments (July 15, 2010)

4. Staff notes that in our April 28, 2010 meeting with the Applicant, that there may be an opportunity to dedicate open space to the County for recreational uses in the western portion of the application area, within Parcels 152-36-1675 and 151-16-0598. Staff notes that this area is located adjacent to Philip A. Bolen Memorial Park, and along Sycolin Creek, which has been identified by Staff as a potential passive stream valley trail corridor connection between Bolen Park and Goose Creek.

Staff requests more information about the Applicant's planned uses for the proposed open space area between Sycolin Creek and Cochran Mill Road, and recommends that the Applicant consider dedicating this area to the County for additional passive and active recreational opportunities.

Applicant Response: The Applicant cannot commit to dedicating the 81.5-acre PD-GI portion of MCPI #151-16-0598 to the County. As indicated previously, the balance of MCPI #151-16-0598 not used for transportation purposes will remain as open space with the understanding that the Applicant reserves the right to amend the Proffer Statement and Concept Development Plan to permit development in the future [see proposed Proffer I.D]. However, the Applicant will commit to providing an easement for a Sycolin Creek natural hiking trail for pedestrians within the proposed "no-build" buffer following the cessation of quarrying activities or sooner at the election of the Luck Stone. The ultimate location may be field located in conjunction with Staff [see proposed Proffer II.C].

**TOWN OF LEESBURG DEPARTMENT OF PLANNING AND ZONING; COMMENTS
PERTAINING TO ZMAP 2009-0004 (JOHN WELLS, 06/10/2010)**

1. A small portion (approximately 80 acres) of the site located north and west of Sycolin Creek is within the UGA/JMLA. Through proffer commitments, the Applicant has designed this portion of the site for open space on the Concept Development Plan via the following note: "ZMAP area northwest of Sycolin Creek to be used for open space purposes until a ZCPA is approved. Refer to ZMAP 2009-0003 proffers." The Town requests clarification on whether such a ZCPA has already been submitted or when one is expected.

Applicant Response: As indicated in the Statement of Justification, any portion of MCPI #151-16-0598 not used for transportation purposes will remain as open space with the understanding that the Applicant reserves the right to amend the proffers and Concept Development Plan to permit development in the future [see proposed Proffer I.D]. To date, no ZCPA has yet been submitted for MCPI #151-16-0598.

2. The Town Plan shows the approximately 80 acres within the UGA/JMLA as planned for "Light Industrial" although no specific description of this parcel is given in the Town Plan's Southeast Sector land Use Policies. The Town believes the proposed open space is a temporary "holding" classification considering the note on the Concept Development Plan indicating a future ZCPA. Leesburg does not consider the open space use as incompatible with the Town Plan's light industrial designation.

Applicant Response: Acknowledged.

3. Luckstone proposes a tunnel under Goose Creek for quarry trucks and equipment to use the existing quarry access on Belmont Ridge Road. There will be no quarry traffic on Cochran Mill Road or other roads near the Town. The Town requests the Applicant make a commitment that all quarry traffic will access through the Luckstone Quarry site on Belmont Ridge Road.

Applicant Response: Under Proffer 10 and Condition 18 of ZMAP 1999-0004 and SPEX 1999-0006, respectively, Luck Stone is prohibited from using Cochran Mill Road (Route 653) for transporting quarried rock. Under this application, the Applicant similarly commits that no quarried rock will be transported on Cochran Mill Road (Route 653) [see proposed Condition 4].

4. The Countywide Transportation Plan shows Cochran Mill as a future 4-lane undivided minor collector with a total right-of-way width of 70 feet. The Town Plan supports this designation although the terminology is slightly different (the Town Plan refers to the road designation as a "through collector"). The Town recommends that the Applicant dedicate or reserve the ultimate right-of-way width.

Applicant Response: The Applicant is willing to dedicate 35 feet from the existing centerline of Cochran Mill Road as a proffered condition of this application [see proposed Condition 11].

5. The Town Plan shows a planned multi-use path near Sycolin Creek east of Cochran Mill Road on land within the UGA/JMLA. The Town recommends that the Applicant dedicate the appropriate right-of-way for this feature.

Applicant Response: The Applicant will commit to providing an easement for a Sycolin Creek natural hiking trail for pedestrians within the proposed “no-build” buffer following the cessation of quarrying activities or sooner at the election of the Luck Stone. The ultimate location may be field located in conjunction with Staff [see proposed Proffer II.C].

6. Because the UGA/JMLA area portion of this site is designated as open space in the rezoning, there will be no sewer or water connections at this time. The comprehensive plans for both Leesburg and Loudoun County have jointly designated this area for service by Town of Leesburg Utilities. In the future, if and when other uses are proposed for this site, the Town will provide utility services.

Applicant Response: Acknowledged.

**VIRGINIA DEPARTMENT OF TRANSPORTATION; COMMENTS PERTAINING TO
ZMAP 2009-0003, SPEX 2009-0027, AND SPEX 2010-0013 (JOHN BASSETT, 06/14/2010)**

1. Right and of way and easements should be dedicated, at no cost, consistent with VDOT's Route 659 Belmont Ridge Road Improvement project #0659-053-262, PE 102, RW202, RW204, C502, C504.

Applicant Response: The Applicant is amenable to dedicating sufficient right-of-way along the Route 659 frontage of MCPI #152-39-5797 so as to accommodate a one-half section as needed for VDOT's Route 659 Belmont Ridge Road Improvement Project #0659-053-262, PE 102, RW202, RW204, C502, C504 [see proposed Condition 6].

2. The Applicant should construct frontage improvements consistent with VDOT's Route 659 Belmont Ridge Road Improvement project #0659-053-262., PE 102, RW202, RW204, C502, C504 or we recommend the County pursue a monetary contribution from this Applicant to be applied towards with VDOT's Route 659 Belmont Ridge Road Improvement project # 0659-053-262., PE 102, RW202, RW204, C502, C504 – in particular, a monetary amount equivalent to the cost of frontage improvements consistent with the cited VDOT project.

Applicant Response: As noted above, the Applicant has agreed to dedicate necessary right-of-way as needed in VDOT's Route 659 Belmont Ridge Road Improvement project #0659-053-262, PE 102, RW202, RW204, C502, C504 [see proposed Condition 6]. The Applicant cannot, however, commit to construction of frontage improvements along the Subject Property's Route 659 frontage. Such a commitment is unwarranted given that this application proposes no additional vehicular trips on Route 659 and does not change traffic volumes.

Even if the existing Luck Stone trips are considered as all "new" trips in the impact evaluation, the peak hour traffic volumes at the three existing Luck Stone driveways along Route 659 comprise approximately 12 percent of the a.m. and four percent of the p.m. roadway peak hour volumes. These impact percentage values were calculated based on Revised Table 3, in "Existing 2009 Peak Hour and Daily Traffic Volumes" as summarized in the Applicant's May 5, 2010 response. Accordingly, the Subject Property's impacts remain below the typical impact threshold of 15 percent (at which point users notice a change in traffic flow).

Construction of frontage improvements is reasonable when applications generate new trips that will impact the existing roadway infrastructure. As the proposed application does not increase traffic volumes along Route 659, there exists no rational nexus between VDOT's request and the pending application. Accordingly, the Applicant should not be responsible for frontage improvements along Route 659.

3. Provide standard right and left turn lanes at the site entrance to Route 659, Belmont Ridge Road.

Applicant Response: While construction of a left turn lane would improve operations at the entrance, additional review of the geometrics, sight distance, and existing utilities and evaluation of multiple construction scenarios have indicated that installation of a separate left turn lane on northbound Belmont Ridge Road that would meet current VDOT design requirements at a 50 mile per hour design speed would require significant turn lane transition lengths extending far south of the existing Luck Stone entrance, could worsen the sight distance characteristics of the existing facility, force the removal of a significant stand of trees in the open space common area presently owned by Belmont Forest/Belmont Greene Community Association, and require the acquisition of off-site right-of-way, water, and gas easements. Additionally, a field review of the intersection indicates that the addition of a northbound left-turn pocket would likely be more dangerous for northbound left turns from Luck Lane and could actually reduce the operability of the intersection.

Importantly, since these requested improvements are not associated with the planned VDOT widening of Route 659, any construction would be abandoned with the ultimate Route 659 widening. The most significant concern is the sight distance associated with the tight horizontal curve located south of Luck Lane and the limited vertical sight distance through the curve for passenger vehicles. Presently, this curve is posted with a 35 mile per hour advisory speed limit, but the VDOT minimum design requirements are based on the regulatory speed at 45 miles per hour. Therefore, adding a left turn lane on northbound Route 659 may require reconstruction of the grades to maintain stopping sight distance, so interim short turn lane construction would still require significant road improvements, even if right-of-way were made available.

The Applicant has reviewed Staff's request in light of the significant costs associated therewith, and notes that this application does not change the land uses or traffic volumes on Route 659. Even if all existing Luck Stone trips are considered "new" trips, the peak hour traffic volumes at the three existing Luck Stone driveways along Route 659 comprise approximately 12 percent of the a.m. and four percent of the p.m. roadway peak hour volumes. Accordingly, the Subject Property's impacts remain below the typical impact threshold of 15 percent (at which point users notice a change in traffic flow) and below which significant transportation commitments should be made. Additionally, the Applicant notes that, insofar as safety statistics are concerned, information obtained from the Loudoun County Sheriff's Office indicates the occurrence of three "angle" accidents at this intersection over the past three years.

Notwithstanding the foregoing and, subject to VDOT approval and acquisition of any necessary easements, the Applicant can commit to a right turn lane at the Luck Lane/Route 659 intersection, the installation of an advance flashing warning signal, and reduced 35 miles per hour speed limit signs along Route 659 in the vicinity of the Luck Entrance. Additionally, subject to permission by the owner of MCPI #152-29-1504 and securing a permanent sight distance easement from said owner, the Applicant shall clear any trees/vegetation located on the inside of the existing curve (on the east side of Route 659), as suggested in the VDOT referral to improve sight distance issues in the vicinity of the intersection [see proposed Condition 10]. The Applicant will continue to work with VDOT to address sight distance and turn lane issues. The Applicant will continue to coordinate with VDOT in providing adequate and safe access to Luck Stone's Route 659 entrance.

4. If a traffic signal is warranted at site entrance to Route 659 then it should be designed and installed by this Applicant when warrants are met as determined by VDOT. Include this verbiage in the proffers.

Applicant Response: As the Applicant noted in its May 6, 2010 response letter, the existing conditions along Route 659 at the Luck Stone entrance do not suggest that a traffic signal is warranted based on seven hour volumes, four hour peaks, and p.m. peak hour trips. Since the Applicant is not increasing traffic at the Luck Stone site entrance on Route 659, a full warrant study to VDOT signal warrant standards evaluating at least eight hours was not prepared. Of the seven hours reviewed, only three hours are satisfied.

The Applicant recognizes that signalization would improve site access and agrees that the costs should be associated with the turns that utilize the signal. The Applicant is willing to pay for the design and installation of a traffic signal at the existing Luck Stone site entrance when warrants are met as determined by VDOT. If the existing site entrance is to be relocated to a future location elsewhere during the Route 659 widening project (i.e., opposite Portsmouth Boulevard), the Applicant is willing to pay for half of the design and installation costs of the signal [see proposed Condition 9].

5. Additionally, related to the Luck Lane site entrance to Route 659: A field review revealed intersection sight distance and/or stopping sight distance to be questionable. Upgrading of this site entrance to meet current VDOT standards should be incorporated into these improvements in order to bring the entrance into compliance to provide a safe entrance.

Applicant Response: Upgrading this section of Route 659 to meet current VDOT design requirements at a 50 mile per hour design speed would force the removal of a significant stand of trees in the open space common area presently owned by Belmont Forest/Belmont Greene Community Association and require the acquisition of off-site right-of-way, water, and gas easements on land not owned by Luck Stone. Importantly, since these requested improvements are not associated with the planned VDOT widening of Route 659, any construction would be abandoned with the ultimate Route 659 widening.

The Applicant has reviewed Staff's request in light of the significant costs associated therewith, and notes that this application does not change the land uses or traffic volumes on Route 659. Even if all existing Luck Stone trips are considered "new" trips, the peak hour traffic volumes at the three existing Luck Stone driveways along Route 659 comprise approximately 12 percent of the a.m. and four percent of the p.m. roadway peak hour volumes. Accordingly, the Subject Property's impacts remain below the typical impact threshold of 15 percent (at which point users notice a change in traffic flow) and below which significant transportation commitments should be made.

Notwithstanding the foregoing and, subject to VDOT approval and acquisition of any necessary easements, the Applicant can commit to a right turn lane at the Luck Lane/Route 659 intersection, the installation of an advance flashing warning signal, and reduced 35 miles per hour speed limit signs along Route 659 in the vicinity of the Luck Entrance. Additionally, subject to permission by the owner of MCPI #152-29-1504 and securing a permanent sight distance easement from said owner, the Applicant shall clear any trees/vegetation located on the inside of the existing curve (on the east side of Route 659), as suggested in the VDOT referral to improve sight distance issues in the vicinity of the intersection [see proposed Condition 10]. The Applicant will continue to work with VDOT to address sight distance and turn lane issues. The Applicant will continue to coordinate with VDOT in providing adequate and safe access to Luck Stone's Route 659 entrance.

6. Dedicate right of way a minimum of 25' from centerline along Gant Lane, Route 653 frontage.

Applicant Response: Gant Lane is assigned Route 652 in the VDOT Secondary System of State Highways. As shown on the plat, the Applicant will dedicate a minimum of 25 feet of right-of-way from the existing centerline of Route 652 along the Subject Property's Route 652 frontage, and shall provide any necessary construction-related (drainage, utility, or construction) easements in mutually-agreed locations. Dedication of this right-of-way and provision of necessary easements shall occur at the request of the County [see proposed Proffer 12].

7. In reference to Cochran Mill Road, Route 652 and in accordance with the Loudoun *Countywide Transportation Plan (CTP)*:

1. Dedicate one-half of the ultimate 70' right of way or 35' from centerline along site frontage

Applicant Response: Cochran Mill Road is assigned Route 653 in the VDOT Secondary System of State Highways. The Applicant will dedicate a minimum of 35' from centerline along the Subject Property's Cochran Mill Road site frontage [see proposed Condition 11].

2. Construct one-half of the ultimate U4 (4-lane undivided) roadway along site frontage

Applicant Response: As noted above, in order to accommodate the widening of Cochran Mill Road, the Applicant will dedicate 35 feet of right-of-way from the centerline along the Subject Property's Cochran Mill Road frontage [see proposed Condition 11]. However, the Applicant cannot commit to

construction of one-half of the ultimate roadway along the Subject Property's Cochran Mill Road site frontage. Not only is such a commitment unwarranted as Luck Stone does not foresee any additional trip generation under this application over that which has been previously approved, but construction of these improvements would require revisiting the roadway profile of Route 653 to satisfy VDOT Collector Road Standards, which is beyond the reasonable improvements associated with the subject application.

Under Proffer 10 and Condition 18 of ZMAP 1999-0004 and SPEX 1999-0006, respectively, Luck Stone is prohibited from using Cochran Mill Road (Route 653) for transporting quarried rock. No trucks will use the proposed entrance for quarry rock distribution and Luck Stone is amenable to a similar proffer/condition applicable to this application.

Additionally, the trips generated by this application have already been accounted for in the context of SPEX 1990-0019, which included the approval of one access point across Sycolin Creek along Cochran Mill Road. This access point was contemplated to be permanently used for emergency and intermittent access by approximately 10 employees, company maintenance vehicles, and supply vendors. Notably, the traffic analysis for SPEX 1990-0019, by Callow Associates, Inc., had conservatively estimated approximately 25 A.M. and P.M. peak directional trips turning to the Luck Stone access on Route 653, to provide maintenance and employee access to the properties west of the Goose Creek.

In consideration of environmental and engineering costs, this application now seeks to relocate the proposed emergency and intermittent service access for a maximum of 10 Luck Stone employees per day. This relocation will not generate any new trips over that which have already been approved along Cochran Mill Road. Even assuming that each of the Applicant's anticipated 25 daily trips were new trips, such volume would constitute a *de minimus* percentage of existing volumes and would not warrant the construction of one-half of the ultimate roadway along the Subject Property's Cochran Mill Road site frontage.

This application will not have any impact on the existing roadway network with new heavy vehicle trips, which is typically the justification for similar Route 653 frontage improvements by others to the north of the W&OD Trail. Consequently, there is no rational relationship between this application and the requested improvement.

3. Entrance to Cochran Mill Road, Route 652 will require a VDOT Entrance Permit which will include but is not limited to verification of adequate sight distance,

specification of an appropriate entrance type, adequately addressing drainage issues, etc.

Applicant Response: Acknowledged.

8. Condition # 5 of SPEX 1990-0019 referencing the requisite right of way dedication of 60' from centerline along Belmont Ridge Road, Route 659 should be made now, if it has not already been dedicated. Please provide status of this right of way dedication.

Applicant Response: The Applicant acknowledges the validity Condition 5 of SPEX 1990-0019, and is certainly willing to make such a dedication, but has not yet been requested by VDOT to dedicate said area, nor has the Applicant been updated as to the current status of the approval of the Route 659 widening project.

9. Please provide this office with a copy of the revised proffers/special exception approval conditions for review.

Applicant Response: A copy of the proposed Proffer Statement is included with this submission for Staff review.

GOOSE CREEK SCENIC ADVISORY COMMITTEE; COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-0027, & ZMAP 2009-0004 (HELEN CASEY, 5/14/2010)

1. After consulting with the project representative, we have reviewed the above applications and have no significant changes in our previous comments

Applicant Response: Acknowledged.

2. We are aware of the land swap between the two companies and find that it will further enhance the protection of the 300' no build-scenic buffer along Goose Creek. Further, the building of the tunnel will negate the need for the previously-approved bridge over the Creek

Applicant Response: Acknowledged.

COMMONWEALTH OF VIRGINIA – DEPARTMENT OF CONSERVATION & RECREATION; COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-0027, SPEX 2010-0013 (S. RENE' HYPES, 6/9/2010)

- DCR reiterates its October 2009 comments. According to the information currently in our files, natural heritage resources have not been documented at this location.

Applicant Response: Acknowledged.

- Our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Applicant Response: Acknowledged.

- DCR supports at least a 300 foot no build zone for the protection of the significant Basic Oak Hickory community documented along Goose Creek as noted on page 4 of the Second Submission: Loudoun Water/Luck Stone ZMAP 2009-0004.

Applicant Response: Acknowledged.

- Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory for the resource in the study area.

Applicant Response: Acknowledged.

- Since it has been determined that this project or activity may impact Ginseng, a state-protected plant, VDACS will respond directly to ensure compliance with Virginia's Endangered Plant and Insect Species Act. Further correspondence regarding the potential impacts of this project or activity on state-listed plant and insect species should be directed to VDACS.

Applicant Response: Acknowledged.

- New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

Applicant Response: Acknowledged.

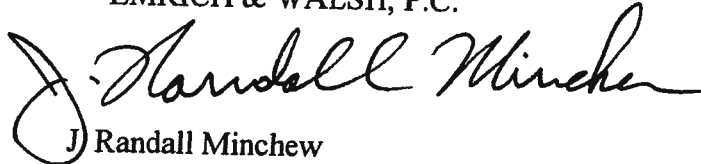
- The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Shirl Dressler at (804) 367-6913

Applicant Response: Acknowledged.

Thank you for your time and consideration in this matter and please feel free to call me or Andrew Painter directly at (703) 737-3633 should you have any questions.

Sincerely,

WALSH, COLUCCI, LUBELEY,
EMRICH & WALSH, P.C.



J Randall Minchew

cc: Brian J. Lubkeman, Esq., McGuire Woods, LLP
Jonathan P. Rak, Esq., McGuire Woods, LLP
Ms. Karen A. Arnold, Senior Planner, Loudoun Water
Ms. Lori R. Greenlief, McGuire Woods, LLP
Mr. Douglas D.R. Palmore, P.E., Luck Stone Corporation
Mr. Mark Peterson, Luck Stone Corporation
Mr. Mark Vigil, Luck Stone Corporation
Mr. William J. Keefe, AICP, Walsh Colucci
Andrew A. Painter, Esq., Walsh Colucci

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**WALSH COLUCCI
LUBELEY EMRICH
& WALSH PC**

August 27, 2010

Via Email & Hand Delivery

Ms. Jane M. McCarter, AICP, Project Planner
Loudoun County Department of Planning
1 Harrison Street, S.E., Third Floor
Leesburg, Virginia 20177

Re: Second Referral Responses: SPEX 2009-0027; Luck Stone Quarry Extension

Dear Ms. McCarter:

On behalf of Luck Stone Corporation, this letter addresses and provides you with a written response to the referral agency comments in the above referenced application. Consistent with Luck Stone's May 6, 2010 submission, this submission includes separate response letters for ZMAP 2009-0003, SPEX 2009-0027, and SPEX 2010-0013. As Staff responded to the previous submission materials by incorporating some or all of the foregoing applications into one or more comment letters, separating out individual comments from multiple letters has proven impractical. Therefore, to ease review by Staff, this document largely directs Staff's attention to the referral response letter for ZMAP 2009-0004 where Staff's prior letters have similarly incorporated such applications.

**LOUDOUN COUNTY DEPARTMENT OF PLANNING-COMMUNITY PLANNING;
COMMENTS PERTAINING TO ZMAP 2009-0003 & SPEX 2009-0027 (PAT GIGLIO,
7/12/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT - ZONING
ADMINISTRATION; COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-
0027 & SPEX 2010-0013 (CINDY LINTZ 7/7/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**LOUDOUN COUNTY OFFICE OF TRANSPORTATION SERVICES; COMMENTS
PERTAINING TO ZMAP 2009-0003, 2009-0004 & SPEX 2009-0027 (GEORGE
PHILLIPS 7/22/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT -
ENVIRONMENTAL REVIEW TEAM; COMMENTS PERTAINING TO ZMAP 2009-
0003, ZMAP 2009-0004, AND SPEX 2009-0027 (WILLIAM MARSH, 7/12/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**VIRGINIA DEPARTMENT OF TRANSPORTATION; COMMENTS PERTAINING TO
ZMAP 2009-0003, SPEX 2009-0027, AND SPEX 2010-0013 (JOHN BASSETT, 06/14/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**GOOSE CREEK SCENIC ADVISORY COMMITTEE; COMMENTS PERTAINING TO
ZMAP 2009-0003, SPEX 2009-0027, & ZMAP 2009-0004 (HELEN CASEY, 5/14/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

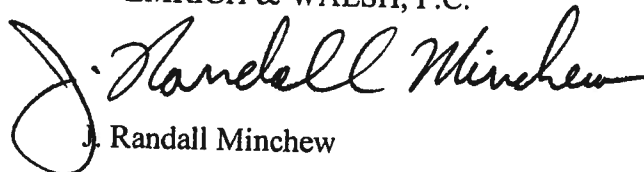
**COMMONWEALTH OF VIRGINIA - DEPARTMENT OF CONSERVATION &
RECREATION; COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-0027,
SPEX 2010-0013 (S. RENE' HYPES, 6/9/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

Thank you for your time and consideration in this matter and please feel free to call me or Andrew Painter directly at (703) 737-3633 should you have any questions.

Sincerely,

WALSH, COLUCCI, LUBELEY,
EMRICH & WALSH, P.C.


J. Randall Minchew

cc: Brian J. Lubkeman, Esq., McGuireWoods, LLP
Jonathan P. Rak, Esq., McGuireWoods, LLP
Ms. Karen A. Arnold, Senior Planner, Loudoun Water
Ms. Lori R. Greenlief, McGuireWoods, LLP
Mr. Douglas D.R. Palmore, P.E., Luck Stone Corporation
Mr. Mark Peterson, Luck Stone Corporation
Mr. Mark Vigil, Luck Stone Corporation
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**WALSH COLUCCI
LUBELEY EMRICH
& WALSH PC**

August 27, 2010

Via Email & Hand Delivery

Ms. Jane M. McCarter, AICP, Project Planner
Loudoun County Department of Planning
1 Harrison Street, S.E., Third Floor
Leesburg, Virginia 20177

Re: Third Submission: SPEX 2010-0013; Luck Stone Inter-Quarry Tunnel

Dear Ms. McCarter:

On behalf of Luck Stone Corporation, this letter addresses and provides you with a written response to the referral agency comments in the above referenced application. Consistent with Luck Stone's May 6, 2010 submission, this submission includes separate response letters for ZMAP 2009-0003, SPEX 2009-0027, and SPEX 2010-0013. As Staff responded to the previous submission materials by incorporating some or all of the foregoing applications into one or more comment letters, separating out individual comments from multiple letters has proven impractical. Therefore, to ease review by Staff, this document largely directs Staff's attention to the referral response letter for ZMAP 2009-0004 where Staff's prior letters have similarly incorporated such applications.

**LOUDOUN COUNTY DEPARTMENT OF PLANNING-COMMUNITY PLANNING;
COMMENTS PERTAINING TO SPEX 2010-0013 (PAT GIGLIO, 7/14/2010)**

1. Staff finds the proposed quarry use and construction of the proposed tunnel on the subject site are supported by the land use and mineral extraction policies of the Plan.

Applicant Response: Acknowledged.

2. Staff finds the proposed tunnel will not impact any green infrastructure elements nor create a visual impact on Goose Creek. Staff defers to the Department of *Building and Development* for further technical review of the safety and engineering details of the proposed tunnel.

Applicant Response: Acknowledged.

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ARLINGTON OFFICE 703 528 4700 • PRINCE WILLIAM OFFICE 703 680 4664

ATTORNEYS AT LAW

**LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT – ZONING
ADMINISTRATION; COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-
0027 & SPEX 2010-0013 (CINDY LINTZ 7/7/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**LOUDOUN COUNTY OFFICE OF TRANSPORTATION SERVICES; COMMENTS
PERTAINING TO ZMAP 2009-0003, 2009-0004 & SPEX 2009-0027 (GEORGE
PHILLIPS 7/22/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**LOUDOUN COUNTY DEPARTMENT OF BUILDING & DEVELOPMENT –
ENVIRONMENTAL REVIEW TEAM; COMMENTS PERTAINING TO ZMAP 2009-
0003, ZMAP 2009-0004, AND SPEX 2009-0027 (WILLIAM MARSH, 7/12/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**LOUDOUN COUNTY PARKS, RECREATION AND COMMUNITY SERVICES;
COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-0027, and SPEX 2010-
0013 (BRIAN FULLER, 10/20/2009)**

[Responses contained in referral response letter for ZMAP 2009-0003]

**VIRGINIA DEPARTMENT OF TRANSPORTATION; COMMENTS PERTAINING TO
ZMAP 2009-0003, SPEX 2009-0027, AND SPEX 2010-0013 (JOHN BASSETT, 06/14/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

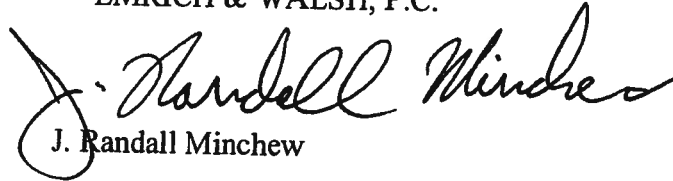
**COMMONWEALTH OF VIRGINIA – DEPARTMENT OF CONSERVATION &
RECREATION; COMMENTS PERTAINING TO ZMAP 2009-0003, SPEX 2009-0027,
SPEX 2010-0013 (S. RENE' HYPES, 6/9/2010)**

[Responses contained in referral response letter for ZMAP 2009-0003]

Thank you for your time and consideration in this matter and please feel free to call me or Andrew Painter directly at (703) 737-3633 should you have any questions.

Sincerely,

WALSH, COLUCCI, LUBELEY,
EMRICH & WALSH, P.C.



J. Randall Minchew

cc: Brian J. Lubkeman, Esq., McGuireWoods, LLP
Jonathan P. Rak, Esq., McGuireWoods, LLP
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Mr. Mark Peterson, Luck Stone Corporation
Mr. Mark Vigil, Luck Stone Corporation
Mr. William J. Keefe, AICP, Walsh Colucci
Andrew A. Painter, Esq., Walsh Colucci

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STATEMENT OF JUSTIFICATION

**ZMAP 2009-0003
(Companion Application to ZMAP 2009-0004)**

Luck Stone Corporation

**Zoning Map Amendment Petition Application
Luck Stone Quarry Extension and Loudoun Water Reclamation Plan**

Loudoun County Tax Parcels ##61-10 (MCPI #152-36-1675), portion of 61-9 (MCPI #152-25-5356), 61-15 (MCPI #153-35-5865 And As Referenced In ZMAP 2009-0004), 61-9B (MCPI #152-27-4798), 61-9A (MCPI #152-26-8334), 61-20A (MCPI #152-16-8431), and 61-8 (MCPI #151-16-0598); ±323.27 acres

August 27, 2010

I. Description of Application

Luck Stone Corporation of Richmond, Virginia (hereinafter, "Luck Stone"), is the owner and operator of a series of quarries in Loudoun County, including the existing "Leesburg Plant" quarry operation located in Loudoun County along Route 659 on the east side of Goose Creek (MCPI #152-39-5797), which it has operated since 1971. The Leesburg Plant consists of Quarries "A" and "B," which are located north and south of the Washington & Old Dominion Trail, respectively. Luck Stone also holds approvals under SPEX 1990-0019, ZMAP 1999-0004, and SPEX 1999-0006 for the eventual extension of the Leesburg Plant operation west of Goose Creek (known as future Quarry "D") located between two parcels, MCPI ##151-37-7403 and 151-16-0598. Luck Stone plans to commence extractive quarrying activities on Quarry D within three to five years.

As part of its long-term planning for future quarry operations, Luck Stone has recently acquired ownership of two additional properties (MCPI ##152-36-1675 and 152-25-5356) comprising approximately 186.19 acres located immediately to the south of the permitted Quarry D parcels. Additionally, as a result of its discussion with Loudoun Water (formerly "Loudoun County Sanitation Authority") concerning the development of Loudoun Water's "Central Water Supply Program" (discussed below), Luck Stone is the contract purchaser of an approximately 118.37-acre portion of a parcel owned by Loudoun Water, MCPI #153-35-5865, which is the subject of a companion rezoning application filed by Loudoun Water and Luck Stone, ZMAP 2009-0004. These three parcels once formed a portion of the former "Ridgewater Park" rezoning application (ZMAP 2005-0028) and are primarily located within the "Transition Policy Area" as defined under the Revised General Plan.

Over the past few months, Luck Stone has also held discussions with representatives from the City of Fairfax (hereinafter, "City") to discuss the City's incorporation of three parcels

it owns (MCPI #152-27-4798, 152-26-8334, and 152-16-8431 and, collectively, "City parcels") into ZMAP 2009-0003, ZMAP 2009-0004, and SPEX 2009-0027 as well as process a Boundary Line Adjustment (hereinafter, "BLA") that would permit the City to own linear waterfront property ownership along its Goose Creek Reservoir while conveying property to Luck Stone to protect and extract subsurface diabase resources to the west. Such a BLA would enhance the protection of the Goose Creek Reservoir and assist both Luck Stone and the City in "straightening out" the individual parcel lines that were established before the Goose Creek Reservoir.

Lastly, per discussion with Staff members, Luck Stone is seeking the rezoning of approximately 81.5 acres of MCPI #151-16-0598 from PD-GI to MR-HI. While this acreage was included in ZMAP 1999-0004 as proffered open space, Luck Stone is now seeking to incorporate this area into this application in order to unify the zoning administration of all Luck Stone properties and to provide temporary and permanent access drives to Luck Stone's properties west of Goose Creek as well as provide Loudoun Water with safe access to their planned water treatment plant as proposed with SPEX 2009-0021.

Parcels ##152-25-5356, 153-35-5865, 152-27-4798, 152-26-8334, and 152-16-8431 are zoned Transitional Residential-10 ("TR-10") in their entirety, while approximately 5.54 acres of MCPI #152-36-1675 is zoned Joint Land Management Area-20 ("JLMA-20") and 110.75 acres is zoned TR-10. Approximately 55.53 acres of Parcel #151-16-0598 is zoned MR-HI, while approximately 81.5 acres are zoned PD-GI. In aggregate, the foregoing parcels are hereinafter referred to as the "Subject Properties").

Luck Stone has long determined that high-quality diabase rock exists on the Subject Properties, and in accord with its longstanding practice in Loudoun County, is petitioning the Board of Supervisors for use of its zoning power to protect these valuable and nonrenewable geologic assets. Luck Stone proposes remapping the Subject Properties from the TR-10 and JLMA-20 zoning districts to the Mineral Resource-Heavy Industry ("MR-HI") in part, and Planned Development-General Industrial ("PD-GI") zoning districts, in part, under Section 3-1000 and 4-600, respectively, of the Revised 1993 Loudoun County Zoning Ordinance (hereinafter, "Zoning Ordinance"). Subject to future boundary surveying work, post-exchange lands to be owned by the City (consisting of approximately 45.6 acres) are proposed to be zoned to the PD-GI zoning district and designated as a "300-foot no build buffer" on the Concept Development Plan. The post-exchange lands to be owned by Luck Stone (consisting of approximately 9.96 acres) are proposed to be rezoned to the MR-HI zoning district and be permitted for quarry uses. The Transition Policy Area is well-suited for quarry-related land development—and prior MR-HI rezoning and related stone quarrying special exception applications have shown these uses to be in conformance with the Revised General Plan.

The proposed quarry pit area for the Subject Properties under this application is approximately 148.6 acres and, following approval of ZMAP 2009-0003, ZMAP 2009-0004, and SPEX 2009-0027, there will be a consolidated permitted quarry area (which includes the

approved "Quarry D" to the north of the Subject Properties) of approximately 257.1 acres as shown on the Special Exception Plat.

This request is made pursuant to the Memorandum of Understanding executed on December 23, 2008 between Luck Stone and Loudoun Water, and between the Letter of Intent executed on February 22, 2010 between Luck Stone and the City of Fairfax.

The following table denotes zoning information for those parcels included in ZMAP 2009-0003. Luck Stone is the sole owner and applicant for the rezoning all or a portion of the following parcels. Incorporation of parcels owned by the City of Fairfax and Loudoun Water into ZMAP 2009-0003 and ZMAP 2009-0004 assumes a future BLA to eliminate internal lot lines.

MCPI Number	Acreage	Existing Zoning	Proposed Zoning	Owner
151-16-0598	137.03	MR-HI (55.53 ac.) PD-GI (81.5 ac.)	MR-HI (81.5 ac.)	Luck Stone
152-36-1675	116.27 ac.	JLMA-20 (5.54 ac.) TR-10 (110.75 ac.)	MR-HI (116.27 ac.)	Luck Stone
152-25-5356	69.92 ac.	TR-10	MR-HI (69.92 ac.)	Luck Stone
153-35-5865*	168.37 ac.	TR-10	MR-HI (148.8 ac.)* PD-GI (19.57 ac.)	Loudoun Water
152-27-4798	5.54 ac.	TR-10	PD-GI (5.54 ac.)	City of Fairfax
152-26-8334	26.87 ac.	TR-10	MR-HI (9.96 ac.) PD-GI (16.91 ac.)	City of Fairfax
152-16-8431*	3.60 ac.	TR-10	PD-GI (3.60 ac.)	City of Fairfax
Total Area To Be Rezoned Under ZMAP 2009-0003:				All or a portion of 7 parcels (±323.27 ac.)
Total Area To Be Rezoned Under ZMAP 2009-0003 & -0004:				All or a portion of 7 parcels (±472.07 ac.)
Total Area To Be Rezoned MR-HI Under ZMAP 2009-0003:				All or a portion of 4 parcels (±277.65 ac.)
Total Area To Be Rezoned PD-GI Under ZMAP 2009-0003:				All or a portion of 4 parcels (±45.62 ac.)

(± 472.07 ac.)

* Denotes parcels/areas included in ZMAP 2009-0004

NOTE: 50 acres of MCPI #153-35-5865 is included in SPEX 2009-0021.

SPEX 2009-0027 was accepted for processing on September 2, 2009 to permit stone quarrying uses under Section 3-1004(J) of the Zoning Ordinance to accommodate the extension to the previously-approved quarrying extraction area. Loudoun Water has submitted a

companion Statement of Justification for ZMAP 2009-0004. A BLA is also being filed concurrent with these land use applications in order to adjust the boundary of Parcel #153-35-5865 to generally coincide with boundary lines of the companion water treatment plant special exception use under SPEX 2009-0021 in the event that all related applications are approved.

II. Project Justification

Over the past few years, Luck Stone has worked with Loudoun Water to develop a long-range plan, known as the "Central Water Supply Program," for withdrawing water from the Potomac River and transmitting the water through pipelines for treatment and eventual storage in existing and future Luck Stone quarries. In the opinion of Loudoun Water, the existing and planned Luck Stone quarries are well-located to provide large capacity water storage for a proposed Potomac River water intake, and their use would permit Loudoun Water to pump and store raw water from the Potomac River during periods of normal and high river flow and withdraw water from the quarries when the water levels in the Potomac are low.

Studies examined by Loudoun Water indicate that the conversion of rock quarries for water storage would not only accommodate Loudoun's growth in water demand for the foreseeable future, but would provide a sustainable source of water storage and benefit the environment by reducing water withdrawals from the Potomac River and Goose Creek during times of drought and low flow. Luck Stone's partnership with Loudoun Water is key to implementing the Central Water Supply Program and reuse of existing and future quarries for public purposes has the potential to provide significant water storage capacity.

Luck Stone is fortunate in that many of the land uses in the vicinity of the Subject Properties have been developed or zoned for compatible industrial or institutional purposes, or are visually/geographically separated from non-compatible land uses by geographical or manmade features (i.e., Goose Creek, Route 659, etc.). Nevertheless, land development has been constructed, approved, and/or proposed within the vicinity of the Subject Properties, diminishing the certainty that the County's remaining high-quality diabase rock resources will be protected and utilized. Furthermore, the future Dulles Metrorail Extension project (which is scheduled to be opened in 2015) along the Dulles Greenway will create a powerful economic incentive for Loudoun County and will spur additional land development in the vicinity of the Subject Properties and may further preempt the recovery of potentially valuable diabase resources.

Merely identifying and determining the value of diabase mineral resources does not necessarily ensure that Loudoun County's mineral resources will be available for recovery. Prime quarry lands must also be properly mapped to a zoning district which permits mineral extraction, and the proposed rezoning seeks to protect, conserve, and reserve—from preemptive and incompatible residential land development—a significant amount of the remaining diabase resources of Loudoun County. Accordingly, Luck Stone is petitioning Loudoun County to use its zoning authority to protect and preserve its valuable geologic assets from future residential land development by rezoning the Subject Properties to the MR-HI zoning district. Section 3-1000 *et*

seq. of the Zoning Ordinance establishes the MR-HI district specifically for the purpose of protecting the County's diabase rock as an economic mineral resource, to provide for diabase resource extraction operations at appropriate locations, and to co-locate with quarries heavy industrial uses compatible with resource extraction.

It is also critical that the Subject Properties be granted the ability to ensure that mineral extraction can take place in a meaningful way and that potential quarry pit areas be of sufficient size to maximize resource recovery. Adequate pit width is critical to the efficient operation of transport and loading equipment as well as the proper storage and efficient removal of overburden and related debris. Quarry size also directly influences tonnage and pit depth, as well as equipment selection, operating costs relative to production life, and diabase quality relative to production life. The size, distribution, and particle shape of quarry pits can differ from one quarry location to another, depending on the geological source of the rock, the crushing equipment used, and the method used for coarse aggregate separation.

Section 3-1007(E)(1) of the Zoning Ordinance provides that "[t]he pit wall of a quarry shall be a minimum of 1,000 feet from the MR-HI district boundary," except where "...quarries are adjacent to the PD-GI or CLI district, the setback may be reduced to a minimum of 50 feet." Strict implementation of a 1,000-foot buffer from the eastern and western edges of the proposed MR-HI zoning district to a future quarry limits on the Subject Properties will narrow the width of the potential quarry pit in a way that greatly reduces substantial recovery of the Subject Properties' subsurface minerals.

Luck Stone's initial filing proposed a 9.72-acre PD-GI protective strip along the eastern border of the three properties owned by Luck Stone and Loudoun Water in order to maximize future quarry pit limits. In its first referral comments, staff noted that given the proposed PD-GI strip's size and arrangement, the proposed PD-GI strip would be vacant, unusable land and would be inconsistent with the PD-GI district's purpose. Staff further noted that, given the TR-10 zoning of the City's parcels to the east (MCPI #152-27-4798, 152-26-8334, and 152-16-8431), such a PD-GI strip would have run counter to the intent of Section 3-1007(E), which serves to lessen negative impacts of quarry uses on non-compatible land uses.

Accordingly, Staff advised Luck Stone to provide the City parcels protection by including them in ZMAP 2009-0003 and ZMAP 2009-0004. As stated above, the forgoing applications incorporate the City's parcels and contemplate a BLA that would permit the City to own linear waterfront property ownership along its Goose Creek Reservoir while conveying property to Luck Stone to protect and extract subsurface diabase resources to the west. Subject to future boundary surveying work, post-exchange lands to be owned by the City (consisting of approximately 45.6 acres) are proposed to be zoned to the PD-GI zoning district and designated as a "300-foot no-build buffer" on the Concept Development Plan. The post-exchange lands to be owned by Luck Stone (consisting of approximately 9.96 acres) are proposed to be rezoned to the MR-HI zoning district and be permitted for quarry uses.

The proposed PD-GI zoning will comprise an incremental addition to the City's water treatment plant parcel east of Goose Creek, MCPI #153-48-3134, which is also zoned PD-GI. This zoning scenario not only allows for a less-intensive use and a transition from MR-HI uses to the west, but also provides the City of Fairfax with a consistent zoning district for a majority of its Goose Creek area properties. Moreover, it serves to enhance the efficient use of the underlying diabase to the west. The range of uses permitted in the proposed PD-GI area is generally compatible with the uses permitted to the east and those MR-HI uses permitted to the west under ZMAP 2009-0005 and SPEX 2009-0009. Lands to the north and east are mapped MR-HI, PD-GI, and PD-IP, while lands to the west and south are proposed to be zoned MR-HI.

Luck Stone is also seeking the rezoning of approximately 81.5 acres of MCPI #151-16-0598 from PD-GI to MR-HI. While this acreage was included in ZMAP 1999-0004 as proffered open space, Luck Stone is seeking to incorporate this area into this application in order to unify the zoning administration of all Luck Stone properties. As shown on the concept plan, Luck Stone proposes two travelways through a portion of MCPI #151-16-0598 in order to access its properties west of Goose Creek as well as provide Loudoun Water with safe access to their planned water treatment plant as proposed with SPEX 2009-0021. The balance of MCPI #151-16-0598 not used for road purposes, in addition to an approximately 14.7-acre portion of MCPI #152-36-1675 located between the Sycolin Creek Floodplain and Cochran Mill Road, will remain as open space until a superseding ZCPA is approved by the Board of Supervisors.

III. Description of Environmental & Historical Features

The Subject Properties contain a mixture of open fields and a combination of evergreen and deciduous forested areas, as well as two farm ponds. Some portions contain major floodplain and wetlands that are subject to the Floodplain Overlay District and US Army Corps of Engineers regulations. Any disturbance within the designated wetland areas will be permitted with the Army Corps of Engineers prior to site plan approval. It is anticipated that any clearing or grading associated with the above proposals will be limited to areas outside of the minimum 300-foot setback along the Goose Creek.

Although a number of archeological sites were recorded during the cultural resource investigations conducted on the Subject Properties, only one archeological site (#44LD1324), located on MCPI #153-35-5865, was recommended for further study if impacts were to occur. A Phase II study conducted for the site by Thunderbird Archaeology in accordance with the 2009 DHR Guidelines for Archeological investigations indicated disturbance at the site. Additionally, the field supervisor and principal investigator utilized investigative methods that met or exceeded the Secretary of Interior's Standards. Most of the artifacts were recovered from secondary, post occupational deposits. The site is not considered to be eligible for the National Register of Historic Places and no additional archeological work is recommended. A report submitted with ZMAP 2009-0004, "Phase II Archeological Evaluation of Site 44LD1324," is included for Staff's review.

IV. Description of Transportation Issues

Access to the Subject Properties will be provided either via Belmont Ridge Road (Route 659) or Cochran Mill Road (Route 653), both of which have direct or secondary access to Route 7 to the north and the Dulles Greenway (Route 267) to the south. Under Proffer 10 and Condition 18 of ZMAP 1999-0004 and SPEX 1999-0006, respectively, Luck Stone is prohibited from using Cochran Mill Road (Route 653) for transporting quarried rock. Luck Stone is amenable to a similar proffer/condition applicable to this application. Cochran Mill Road is presently a variable-width paved and unpaved road. Belmont Ridge Road is presently a two-lane undivided paved collector road, and it is Luck Stone's understanding that the Virginia Department of Transportation is presently working to widen the road to a four-lane section between Route 7 and the Dulles Greenway.

The volume of quarry-related truck traffic is directly tied to market demand and, since the proposed extension of the quarry use will not increase the intensity of crushed stone production or the sales volume, and considering that market demand will not change as a result of the approval of this application, the quarry extension will serve only to extend the functional life of the existing Leesburg Plant quarry operation while protecting the diabase assets with appropriate zoning entitlements. Accordingly, and as discussed in the Transportation Analysis prepared by Patton, Harris, Rust & Associates, Luck Stone does not foresee additional business activity or any increases in vehicle trips by virtue of approval of ZMAP 2009-0003, ZMAP 2009-0004, or SPEX 2009-0027 over that which has been previously approved.

IV.A Primary Access: Tunnel

In conjunction with this request, Luck Stone has proposed a special exception to revise conditions 14 through 19 approved under SPEX 1990-0019 to permit a below-grade inter-quarry tunnel access road, rather than the approved conveyor/bridge, to serve as the primary connection between the approved and proposed quarries on the west side of Goose Creek and the existing Leesburg quarry and crushing operations on the east side of Goose Creek. This request was previously made in conjunction with SPEX 2009-0027; however, at the request of Staff, Luck Stone has agreed to segregate this request from the larger quarry request.

Luck Stone will utilize an existing farm lane and bridge on MCPI #151-16-0598 to begin the excavation of the inter-quarry tunnel below Goose Creek. The balance of MCPI #151-16-0598 will remain as open space until a superseding ZCPA is approved by the Board of Supervisors, and no transportation of quarried rock will occur through the farm lane or bridge.

IV.B. Emergency/Service Access

Notably, SPEX 1990-0019 included the approval of one access point across Sycolin Creek along Cochran Mill Road, which was contemplated to be permanently used for emergency

and intermittent access by approximately 10 employees, company maintenance vehicles, and supply vendors. In recent years however, Luck Stone has evaluated the feasibility of the approved crossing in light of recent stream mitigation efforts along Sycolin Creek, engineering costs, significant topographic challenges, as well as the future needs of Luck Stone's proposed quarry extension by virtue of this application.

In consideration of these physical and environmental factors, Luck Stone now proposes that emergency and intermittent service access for quarry related activities west of Goose Creek be provided via a private road constructed on a new alignment between Cochran Mill Road and Gant Lane. As shown on the Concept Development Plan, the proposed alignment will traverse the Sycolin Creek floodplain at its narrowest point. This new road, the location of which was selected to minimize disturbance of wetlands and floodplain, will provide emergency and intermittent service access for a maximum of 10 Luck Stone employees per day. As noted above, no transportation of quarried rock will occur through this access point. Luck Stone will not use any portion of Gant Lane for access.

Notably, the traffic analysis for SPEX 1990-0019, by Callow Associates, Inc., had conservatively estimated approximately 25 A.M. and P.M. peak directional trips turning to the Luck Stone access on Route 653, to provide maintenance and employee access to the properties west of the Goose Creek. These volumes exceed the anticipated activities, and could be accommodated with proposed access improvements in coordination with the pending Loudoun Water application.

In addition to assisting Luck Stone, the new permanent road connection between Cochran Mill Road and Gant Lane will also provide improved access to the proposed water treatment plant for up to 20 Loudoun Water employees and an average of two trips per day for truck deliveries and service vehicles. The southern terminus of Gant Lane abuts MCPI # 153-35-5865 and will be used to provide access to the water treatment plant via a private road over that parcel.

V. Comprehensive Plan Policies & Recommendations

The Subject Properties are located in the Lower Sycolin Subarea of the Transition Policy Area under the Revised General Plan and are included in the diabase map of the Toll Road Plan. For over 20 years, Luck Stone Corporation has actively supported Loudoun County's comprehensive planning attempts to protect the County's non-renewable diabase rock assets. Most recently, Luck Stone worked closely with the Board of Supervisors, Planning Commission, staff, and residents in supporting Staff-recommended text provisions in the Revised General Plan, as well as the concept of the north-south Transition Policy Area between the Suburban Policy Area and the Rural Policy Area.

The proposed rezoning is in conformance with the land use policies and text as well as the land use map of the Revised General Plan. The Revised General Plan's extractive industry policies and recommendations specifically note the importance of the Leesburg Plant and advise

of the need to protect the quarry from encroaching residential development. Existing quarry operations are to be promoted in the County as long as the quarry property is well buffered from surrounding residential uses. Specific Revised General Plan policies for mineral extraction in this area of Loudoun County are discussed below:

A. Transition Policy Area Recommendations

The Transition Policy Area recommendations in Chapter 8 of the Revised General Plan provide direct support for the proposed ZMAP application. These policies recognize the importance of subterranean diabase rock assets to the economic future of Loudoun County and recommend that areas that possess this resource be preserved through land acquisition and use of the zoning power of the county. Luck Stone Corporation proposes to preserve the existing diabase resources that exist on the Subject Properties and those adjacent to it through its extensive land acquisition efforts. The following text in italics represents Luck Stone's considerations on each policy:

- (1) **"The County will continue to protect the extractive industry (Bull Run and Luck Stone quarries) through a Quarry Overlay District" (Page 8-2).**

The proposed rezoning will ensure compliance with this comprehensive planning policy by protecting the County's active quarry operations and diabase-enriched lands from incompatible uses through proper application of its zoning powers.

- (2) **"Luck Stone Quarry, located within the Lower Sycolin subarea, will continue to be protected from encroaching residential development. Also, the creation of a buffer and voluntary open space area that is consistent with the RSCOD policies is a priority in this subarea" (Page 8-5).**

Luck Stone seeks to extend the permitted MR-HI zoning district to the south of the currently permitted Quarry D and to buffer the quarry pit from adjacent land areas within the Transition Policy Area and along Goose Creek. The proposed PD-GI zoning will not only allow for a less-intensive use and a transition from MR-HI uses to the west, but will also provide the City of Fairfax with a consistent zoning district for a majority of its Goose Creek area properties and enhance the efficient use of the underlying diabase to the west. The proposed rezoning will ensure compliance with this comprehensive planning policy by protecting the County's active quarry operations and diabase-enriched lands from incompatible uses through proper application of its zoning powers.

- (3) **"The County will protect the Bull Run Quarry in the Lower Bull Run Sub-area and the Luck Stone Quarry in the lower Sycolin Sub-area from incompatible uses by ensuring that encroaching new development does not hinder the quarry operation" (Page 8-8).**

The proposed rezoning will ensure compliance with this comprehensive planning policy by extending the MR-HI zoning district south of the planned Quarry D to the Dulles Greenway and providing the opportunity for the development of a compatible adjacent non-residential use. The proposed PD-GI zoning will not only allow for a less-intensive use and a transition from MR-HI uses to the west, but will also provide for the efficient use of the underlying diabase to the west.

- (4) “The County’s vision for the Transition Policy Area is for land uses that provide a visual and spatial transition between the suburban development in the east and rural development in the west. The Transition Policy Area will be developed as a unique and innovative blend of rural and suburban development features that fully integrate the elements of the Green Infrastructure, and establish natural open spaces as a predominant visual element and enhancement to the area’s river and stream corridors” (Pages 8-1 & 8-2).**

The proposed rezoning will implement the open space provisions of the Revised General Plan and maintain a balance between the built and natural environment. The proposal provides for a 300 foot no-build buffer along Goose Creek, providing for a continued open space network and visual buffer between the proposed development and this state-designated scenic river. Additional open space and natural open space will be maintained along the buffer portions of the Subject Properties. The proposed rezoning of the Subject Properties will respect the Goose Creek stream corridor and reservoir, and related wetlands, floodplains, cultural resources, steep slopes and potential wildlife habitats.

- (5) “Create and supplement the 300-foot buffer and 1000-foot voluntary open space area proposed along the Goose Creek and the Goose Creek Reservoir and the Beaverdam Reservoir in the Lower Sycolin and Middle Goose subareas, consistent with the RSCOD policies” (Page 8-8).**

The proposed rezoning and special exception for stone quarrying uses under SPEX 2009-0027 will implement this policy recommendation such that much of the Subject Properties will be buffer area surrounding both the proposed quarry pit area and the future water treatment plant. An existing slope and maintenance easement and storm structure outfall exists along the northern side of the Dulles Greenway at Goose Creek. A 300 foot no-build buffer will be provided along Goose Creek just beyond an existing slope/maintenance easement and storm structure outfall so as to provide a continued network of open space along the Subject Properties’ Goose Creek frontage. This no-build buffer will be supplemented in some areas by additional natural open space and landscape treatment. Extensive berms and landscaping (anticipated to be between 10 and 20 feet high and landscaped with tree cover) will protect the adjacent agricultural/low-density residential properties from the visual and auditory

impacts of the quarry use and will provide for creation of a significant buffer adjacent to the Goose Creek. A required 150-foot building setback along the Dulles Greenway will also be provided.

B. Green Infrastructure Recommendations - Mineral Resource Extraction Policies

In adopting the Revised General Plan, Loudoun County determined that its non-renewable diabase rock assets are important economic and natural resource elements that deserve protection for future use as components of the County's "Green Infrastructure." The Revised General Plan notes that the site-specific nature of quarries can help the County focus protection on key diabase resource areas and emphasize the continued viability and compatibility of quarrying operations. In discussing Loudoun's diabase rock assets as Green Infrastructure components, Chapter 5, Pages 5-15 and 5-16, of the Revised General Plan provides the following recommendations, and the following text in italics represents the Luck Stone's considerations on each policy:

- (1) "Quarrying is an industry based on the natural resources of the County and shall be encouraged and the resource protected."**

Loudoun County benefits from significant reserves of high-quality mineral resources. Loudoun's particular variety of diabase—a fine-grained igneous trap rock with a coarse and uniform texture—is darker in color and has been found to withstand pressure of up to 23,000 pounds per square inch. Other than a slight darkening of its color, the stone undergoes no change on an exposure of 25 years. Loudoun's diabase belt runs in a north-south direction, largely paralleling Belmont Ridge Road.

Luck Stone's Leesburg Plant has recovered much of this unique aggregate and provided much of the crushed stone and gravel for construction in Loudoun County over the past four decades. As one of the largest private, family owned and operated aggregates suppliers in the nation, Luck Stone is proud to be located within Loudoun County and assist in the recovery of the County's remaining mineral resources in an environmentally-sensitive manner.

The company's quarrying operations are important employers and economic assets and the proposed rezoning will not only ensure compliance with this comprehensive planning policy, but will ensure that Luck Stone can continue to provide essential raw materials for roads, construction, manufacturing, landscaping, and more.

- (2) "The County will recognize and protect its viable extraction industry. The County will protect viable quarries and its diabase resource areas from**

incompatible neighboring uses. New development will take existing quarries into account.”

Section 3-1001 of the Zoning Ordinance establishes the MR-HI district specifically for the purpose of protecting the County's diabase rock as a mineral resource, to provide for diabase resource extraction operations at appropriate locations, and to co-locate with quarries heavy industrial uses compatible with resource extraction. Luck Stone is petitioning Loudoun County to use its zoning authority to protect and preserve its valuable geologic assets from future land development by rezoning the Subject Properties to the MR-HI zoning district. Loudoun Water's proposed water treatment plant as proposed under SPEX 2009-0021, will be a compatible adjacent land use.

- (3) “The County will foster efficient use of its diabase resource. To help achieve this goal, the County will maintain a quarry zoning district that should provide a total of at least 800 acres in Loudoun County to be set aside for extraction and associated activities. The quarry zoning district will make quarrying a permissible use. No residential uses other than watchman's quarters will be permitted in this district. Non-residential uses will be limited to low coverage, heavy industrial uses that will not be adversely affected by quarry operations.”**

The proposed rezoning will make efficient use of the Subject Properties' mineral resources and associated extraction activities, particularly when coupled with Luck Stone's approved “Quarry D” and Luck Stone's existing Leesburg Plant quarry operation to the north. Further, no residential uses will be permitted within the proposed MR-HI zoning district extension area. The proposed water treatment plant as proposed under SPEX 2009-0027, is a low coverage use that will not be adversely affected by quarrying operations.

- (4) “Quarry zoning districts should be located on areas where quarries presently exist and/or in industrial communities where the diabase is within the Ldn 65-noise contour of an airport. Areas within the 65 Ldn noise contour and adjoining existing quarries should be preserved for this purpose.”**

As stated above, the requested MR-HI zoning is proposed as an extension to Luck Stone's approved “Quarry D” and existing Leesburg Plant quarry operation. A portion of the Subject Properties is located within the 65 Ldn noise contour of the Leesburg Airport.

- (5) “The County will facilitate the long-range planning of quarry sites, including setting aside sufficient land for extraction and creating an environment that will be attractive for future users once the quarrying use is no longer viable.”**

Luck Stone has filed SPEX 2009-0027 for stone quarrying uses on a portion of the Subject Properties and is committed to the long-range planning of its existing and future quarries once mineral resource extraction has ceased. In line with the Central Water Supply Program, Loudoun Water desires to use Luck Stone's vacated quarries for water banking (water storage). Luck Stone and Loudoun Water have also entered into a non-binding agreement to consider Water Banking as an option for Luck Stone's quarries in the area as a means of securing up to eight billion gallons of water storage capacity. Luck Stone is also exploring the potential for recreational and other feasible reclamation uses that would benefit the public.

Luck Stone has also sought ways to contribute to the overall biodiversity picture of Loudoun County by enhancing the environmental aspects of ongoing quarrying operations, including providing places for a wide variety of wildlife and a host of plant species that wildlife can feed upon that might not be available in adjacent non-quarry areas.

- (6) "The County will develop and apply standards that seek to protect existing and planned neighboring uses from the negative impacts of resource extraction activities. Such negative impacts might include threats to property values, public health and safety, as well as short- and long-term environmental degradation. Such impacts will be mitigated by buffer requirements, noise mitigation requirements, and other mitigation techniques."**

Luck Stone is committed to being a good neighbor, and strives to serve as an asset to the communities in which it operates. Luck Stone has constructed landscaped berms between quarry limits and adjacent properties, maintained tree cover on non-quarry lands, constructed aesthetically-appropriate fencing and improved the entrance features to its properties, routinely met with homeowners associations and property owners to keep them informed as to future quarrying plans and blasting schedules, and worked to ensure that dirt and other quarrying debris are removed from transport vehicles prior to leaving the quarry site.

Luck Stone has filed SPEX 2009-0027 for stone quarrying uses and any future quarrying activity on the Subject Properties will be in line with past practices and will protect existing and planned neighboring uses from the negative impacts of its resource extraction activities. The present rezoning only seeks to protect and preserve the Subject Properties' valuable geologic assets from future land development by rezoning the Subject Properties to the MR-HI zoning district.

- (7) "Diabase extraction activities must be located with direct access to roads that are constructed to industrial standards. These standards will be applied so**

that quarries have adequate roads linking them to the regional road network.”

While stone quarrying uses are not being proposed in this application, the Subject Properties do have adequate roads linking them to the regional road network. The Subject Properties have access to Gant Lane (Route 652). And secondary access to Belmont Ridge Road (Route 659) and Cochran Mill Road (Route 653). Any future stone quarrying uses of the Subject Properties will comply with Condition 18 under SPEX 1999-0006, whereby Luck Stone is effectively permitted to ship quarried rock material only via Belmont Ridge Road, and Luck Stone anticipates only using Route 659 for truck access in the future.

- (8) “The County will encourage the innovative and sensitive reuse of quarries and resource extraction sites.”**

As stated above, the proposed rezoning does not include a special exception for stone quarrying uses; nevertheless, Luck Stone is committed to long-range planning of its existing and future quarries once mineral resource extraction has ceased. A chief aim of the Central Water Supply Program is the reuse of exhausted quarries for water banking. Luck Stone and Loudoun Water have also entered into a non binding agreement to consider Water Banking as an option for Luck Stone’s quarries in the area as a means of securing up to 8 billion gallons of water storage capacity. Luck Stone anticipates that its request for quarrying activity on the Subject Properties per SPEX 2009-0027 will be accompanied by an innovative and sensitive reclamation plan that provides a concept plan for use of the Subject Properties after extraction is complete.

- (9) “An application to permit the development of new quarries or the extension of existing quarries will include a concept plan for use of the site after extraction is complete.”**

As stated above, the current rezoning request does not include a proposed special exception for stone quarrying uses, and only seeks to protect and preserve the Subject Properties’ valuable geologic assets from future land development by rezoning the Subject Properties to the MR-HI zoning district. Luck Stone anticipates that its request for quarrying activity on the Subject Properties per SPEX 2009-0027 will be accompanied by an innovative and sensitive reclamation plan that provides a concept plan for use of the Subject Properties after extraction is complete.

C. Green Infrastructure Recommendations – General

Additional general Green Infrastructure policies are recognized in the Revised General Plan, and the following text in italics represents the Luck Stone's considerations on each policy:

- (1) **"The County recognizes its Green Infrastructure as a collection of natural, cultural, heritage, environmental, protected, passive, and active resources that will be integrated in a related system. It will provide the framework for strategic land use planning policies, provide the context for all development and ensure quality of life throughout the County. It includes major rivers, stream corridors, floodplains and wetlands; lakes; reservoirs and impoundments; limestone conglomerate, mineral resources and prime agricultural soils, steep slopes; ridges and mountainsides; protected forests and vegetative landscapes; wildlife and endangered species habitats; heritage resources; scenic corridors, parks, greenways, trails, and recreational facilities" (page 5-2).**

Compliance with Plan policies: The Subject Properties generally contain a mixture of open fields and a combination of evergreen and deciduous forested areas. In addition to the mineral resources that have been discussed above, other Green Infrastructure elements have been identified on the rezoning plat submission and include the Goose Creek stream corridor, wetlands, floodplain, steep slopes and cultural resources. It is anticipated that clearing or grading will generally be limited to areas outside of the minimum 300-foot setback along Goose Creek so as to minimize disturbance of these elements. Any disturbance within other designated wetland areas will be permitted with the Army Corps of Engineers prior to site plan approval. More specific detail will be provided in companion special exception application filings for the proposed quarry and water treatment plant uses.

- (2) **A conservation design method will be applied during the land development and redevelopment processes. Elements of the Green Infrastructure will be identified with the initial submission of each proposal, as a guide to the placement of structures, drainage, utilities, and roads...." (Page 5-2).**

Green Infrastructure elements have been identified as noted, along with existing areas of disturbance related to easements and roads in order to establish both no-build and clearing and grading limits on the Subject Properties. Land disturbance associated with the necessary extension of utilities will be minimized. More specific detail will be provided in companion special exception application filings for the proposed quarry and water treatment plant uses.

VI. Zoning Map Amendment Review Criteria

Section 6-1211(E) of the Zoning Ordinance contains evaluation criteria for approval of ZMAP applications and, in considering this application, the following enumerated factors shall be given reasonable consideration. The Zoning Ordinance specifies that an applicant is to address each factor in its statement of justification (unless any such criteria are deemed inapplicable to the application). The following text in italics represents the Luck Stone's response to each factor:

(1) Whether the proposed zoning district classification is consistent with the Comprehensive Plan:

For reasons discussed above, the proposed rezoning for future stone quarrying uses are consistent with the Revised General Plan and the Countywide Transportation Plan.

(2) Whether there are any changed or changing conditions in the area affected that make the proposed rezoning appropriate:

Since the Revised General Plan's adoption, significant residential development has been constructed, approved, or proposed within the vicinity of the Subject Properties, diminishing the certainty that the county's diabase rock resources will be protected and utilized in the future. Significant residential and commercial development has occurred, or is occurring, near the Subject properties, including at Belmont Greene and Goose Creek Village. Furthermore, the future Dulles Metrorail Extension project (which is scheduled to be opened in 2015) along the Dulles Greenway will provide a dynamic transportation center in the coming years that will create a powerful economic engine for Loudoun County.

The Revised General Plan contemplates that diabase rock resources of high-quality exists outside the boundaries of previously-approved quarry properties and that it is important to protect the County's active quarry operations and diabase-enriched lands from incompatible uses through proper application of its zoning powers. Through the adoption of the Revised General Plan, the Loudoun County Board of Supervisors recognized the importance of its diabase rock assets and determined that these assets were elements of its "Green Infrastructure," and this application is being filed to implement the Revised General Plan's goals.

(3) Whether the range of uses in the proposed zoning district classification are compatible with the uses permitted on other property in the immediate vicinity:

Though the uses permitted in the proposed MR-HI zoning district are different than those permitted in the TR-10 and JLMA-20 zoning districts, they are nevertheless compatible with the Revised General Plan policies that govern this area, as well as the existing and planned land uses within the vicinity of the Subject Properties. The Subject Properties lie

immediately adjacent to the existing Leesburg Quarry and its approved extension for Quarry D, and possess excellent diabase rock assets. For reasons stated above, the existing TR-10 zoning of this land is not appropriate to achieve implementation of the Revised General Plan's policy goals.

Although other property in the vicinity of the Subject Properties may currently be zoned TR-10, the area to the north of the Subject Properties is permitted for quarry uses, areas along the Goose Creek and on the west side of Route 659 are largely zoned and planned for industrial uses. Substantial buffers are proposed along the Goose Creek, while land to the south of the proposed MR-HI district is buffered from the proposed rezoning by the Dulles Greenway. The area to the north of the Subject Properties along Route 653 is already developed with industrial uses and the County's land use plan shows the area as appropriate for Heavy Industry and Business, while land directly to the west has previously been proposed for mixed use and is presently being proposed for industrial uses under the proposed "Stonewall Secure Business Park" (ZMAP 2008-0017, SPEX 2008-0068, SPEX 2008-0069) and "Hybrid Energy Park at Stonewall Secure Business Park" (SPEX 2009-0009& CMPT 2009-0001) applications.

- (4) Whether adequate utility, sewer and water, transportation, school and other facilities exist or can be provided to serve the uses that would be permitted on the property if it were rezoned:**

Luck Stone intends to use the existing private sanitary drainfield and a water well located on MCPI 151-16-0598 to provide service to its on-site employees until such time that public sewer and water are available. Any other existing wells or drainfields discovered will be reviewed by the Loudoun County Health Department. The potable water usage and wastewater generation of the quarry use is minimal. With no residential proposed, there will be no effect on the school system. Transportation considerations are discussed above and are incorporated herein.

- (5) The effect of the proposed rezoning on the County's ground water supply:**

The proposed rezoning will not have an effect on the County's groundwater supply, and any future stone quarrying use proposal will include a detailed Hydrogeologic Assessment of the Subject Properties. The water treatment plant proposed in Loudoun Water's companion special exception application will be developed in accordance with the Goose Creek Watershed Protection Program. Best Management Practices will be utilized to accommodate surface water runoff and will include the implementation of Low Impact Development techniques to maximize and protect groundwater recharge.

- (6) The effect of uses allowed by the proposed rezoning on the structural capacity of the soils:**

Soil characteristics of the Subject Properties are shown on the Existing Conditions Plat; however, by virtue of the nature of the application, this factor is not applicable. Any future special exception applications for stone quarrying uses will remove the top soils and overburden resting on top of the diabase rock and will use it to construct the perimeter berms.

- (7) The impact that the uses that would be permitted if the property were rezoned will have upon the volume of vehicular and pedestrian traffic and traffic safety in the vicinity and whether the proposed rezoning uses sufficient measures to mitigate the impact of through construction traffic on existing neighborhoods and school areas:**

As shown in the Transportation Analysis prepared by Patton, Harris, Rust & Associates, no increases in vehicle trips will occur by virtue of the proposed quarry extension, and a negligible increase will result from the proposed development of a water treatment plant on a portion of the Subject Properties. Under Condition 18 under SPEX 1999-0006, Luck Stone is effectively permitted to ship quarried rock material only via Belmont Ridge Road, and Luck Stone anticipates only using Route 659 for truck access in the future with approved quarry use of the Subject Properties. Because the output of the stone crushing operation at the Leesburg Plant (Quarries "A" and "B") will remain in its present location, even after quarrying operations begin west of Goose Creek, extension of the existing quarry will therefore only extend the useful life of the existing quarry. There will be no increase in product output or vehicular trips using Belmont Ridge Road or any other roadway as a result of these proposals. The contents of Section IV above are incorporated herein.

- (8) Whether reasonably viable economic use of the subject property exists under the current zoning:**

While the existing TR-10 and JLMA-20 zoning presently allows reasonable use of the Subject Properties, they are not the best zoning districts by which to implement the Revised General Plan's policies, nor do they ensure implementation of other Green Infrastructure elements of the Revised General Plan (i.e., a 300-foot no-build buffer along Goose Creek). Furthermore, neither zoning district protects the Subject Properties' valuable mineral resources, nor do they permit extractive industry. This land could be developed with residential units; however, the Revised General Plan recognizes the importance of protecting non-renewable Loudoun County resources, such as the high-grade diabase rock, for a future economic use to benefit the County and its citizens.

- (9) The effect of the proposed rezoning on environmentally sensitive land or natural features, wildlife habitat, vegetation, water quality and air quality:**

As a part of the proposed rezoning, Loudoun Water and Luck Stone Corporation retained the services of Wetlands Studies and Solutions to prepare a detailed environmental report regarding the proposed uses. While the proposed rezoning will have no negative impacts

upon protected wetlands, floodplains, or other natural features within the area proposed as a 300-foot no-build buffer along the Goose Creek frontage, SPEX 2009-0027 will have an impact on these lands. Luck Stone will seek to mitigate any negative impacts on-site or within Loudoun County. Additionally, a Type 4 buffer will be planted in accordance with Section 5-1414(B)(4) of the Zoning Ordinance. More specific detail is provided in the submission materials for SPEX 2009-0027 as to the effect of the proposed quarry-related uses on these environmental/natural features.

- (10) Whether the proposed rezoning encourages economic development activities in areas designated by the Comprehensive Plan and provides desirable employment and enlarges the tax base:**

As previously mentioned, the proposed uses will protect a non-renewable Loudoun County resource, namely high-grade diabase rock, for a future economic use to benefit Loudoun County and its citizens. The location of this non-renewable resource is noted in the Revised General Plan and Toll Road Plan with policies that support the protection of the high-grade diabase rock for future use. Additionally, the extension of the life of the quarry will ensure that the real property tax revenue benefits to Loudoun County are continued for an extended period. It should be noted that the proposed uses will have no impact on the Loudoun County's public school system.

- (11) Whether the proposed rezoning considers the needs of agriculture, industry, and businesses in future growth:**

The proposed rezoning considers the needs of industrial and commercial businesses, and is in conformance with the land use and density policies of the Revised General Plan. Luck Stone's quarry operations are a valuable and important industry that supports many other industries in the County. The proposed rezoning will allow for high-grade diabase rock assets to be protected for future utilization by Loudoun County industry, agriculture, and businesses. Diabase stone resources are critical for use in a growing jurisdiction and are not amenable to long-distance transportation. As a result, locally-serving diabase rock quarries are crucial for the long-term economic development of Loudoun County. Luck Stone's Leesburg Plant will continue to serve these industries for many years to come if the Board of Supervisors approves this application.

- (12) Whether the proposed rezoning considers the current and future requirements of the community as to land for various purposes as determined by population and economic studies:**

The proposed rezoning considers Loudoun County's current and future requirements as to land for various purposes as well as the fluidity of the commercial and office market, and seeks to best position the future use of the Subject Properties to support the long-term marketability and suitability of all land uses in the community.

- (13) Whether the proposed rezoning encourages the conservation of properties and their values and the encouragement of the most appropriate use of land throughout the County:**

The proposed rezoning complements planned land uses while not overburdening existing neighborhoods. This proposed rezoning will not adversely affect property values; it is the best zoning district to protect the Subject Properties' viable diabase resources and to protect against any incompatible residential uses in the Transition Policy Area.

- (14) Whether the proposed rezoning considers trends of growth or changes, employment, and economic factors, the need for housing, probable future economic and population growth of the County:**

According to U.S. Census Bureau estimates, the population in Loudoun County increased from 169,599 in 200 to 301,171 in 2009 (a 77.6 percent increase). While the 2010 Census count will not be made public until later this year, this application proposes to safeguard a sensitive non-renewable resource that is and will be important to development and construction throughout the County. The proposed rezoning will provide an opportunity to protect such a valuable resource to ensure the continued economic viability of the Leesburg Plant and to provide an efficient, dependable means of providing for public water to the area served by Loudoun Water's Central Water Supply System.

- (15) The effect of the proposed rezoning to provide moderate housing by enhancing opportunities for all qualified residents of Loudoun County:**

No housing is proposed with this proposal, therefore this factor is not applicable.

- (16) The effect of the rezoning on natural, scenic, archaeological, or historic features of significant importance:**

The uses proposed as part of the proposed rezoning will not significantly impact any natural, scenic, archaeological, or historic features. Future stone quarrying and the water treatment plant as proposed under SPEX 2009-0027 and SPEX 2009-0021, respectively, will be maintained outside the major floodplain along the Sycolin and Goose Creeks, as shown on the rezoning plat.

VII. Conclusion

For the foregoing reasons, Luck Stone Corporation and Loudoun Water respectfully submit that the Subject Properties should be rezoned to the MR-HI and PD-GI zoning districts. The proposed zoning is in conformance with all applicable elements of the Revised General Plan and would provide a vehicle for protecting the nonrenewable diabase rock resource for future

economic development utilization, and would provide an opportunity for optimizing water service to the Central Water Supply System of the County. No additional vehicle trips are anticipated by virtue of this proposal as it relates to future stone quarrying use, and relatively few trips are anticipated with Loudoun Water's proposed water treatment plant. Luck Stone Corporation and Loudoun Water look forward to working with Loudoun County on this important application.

L0190996.DOC

STATEMENT OF JUSTIFICATION

SPEX 2009-0027

Luck Stone Corporation

**Special Exception Application For Stone Quarrying Uses
Luck Stone Quarry Extension**

Loudoun County Tax Parcels ##61-10 (MCPI #152-36-1675), A Portion Of 61-9 (MCPI #152-25-5356), 61-6 (MCPI # 151-37-7403), 61-9A (MCPI #152-26-8334), Portion of 61-8 (MCPI #151-16-0598), And A Portion of 61-15, (MCPI #153-35-5865 And As Referenced In ZMAP 2009-0003 & ZMAP 2009-0004); ±321.12 acres

August 27, 2010

I. Description of Application

Luck Stone Corporation of Richmond, Virginia (hereinafter, "Luck Stone"), is the owner and operator of a series of stone quarries in Loudoun County, including the existing "Leesburg Plant" quarry operation located in Loudoun County along Route 659 on the east side of Goose Creek (MCPI #152-39-5797), which it has operated since 1971. The Leesburg Plant consists of Quarries "A" and "B," which are located north and south of the Washington & Old Dominion Trail, respectively. Luck Stone also holds approvals under SPEX 1990-0019, ZMAP 1999-0004, and SPEX 1999-0006 for the eventual extension of the Leesburg Plant operation west of Goose Creek (known as future Quarry "D") located between two parcels, MCPI ##151-37-7403 and 151-16-0598. Luck Stone plans to commence extractive quarrying activities on Quarry D within three to five years.

As part of its long-term planning for future quarry operations, Luck Stone has acquired ownership of two additional properties (MCPI ##152-36-1675 and 152-25-5356) comprising approximately 186.23 acres located immediately to the south of the permitted Quarry D parcels. Additionally, as a result of its discussion with Loudoun Water (formerly "Loudoun County Sanitation Authority") concerning the development of Loudoun Water's "Central Water Supply Program" (discussed below), Luck Stone is the contract purchaser of an approximately 118-acre portion of a 168.37-acre parcel owned by Loudoun Water, MCPI #153-35-5865, which is the subject of a companion rezoning application filed jointly by Loudoun Water and Luck Stone. These three parcels once formed a portion of the former "Ridgewater Park" rezoning application (ZMAP 2005-0028) and are primarily located within the "Transition Policy Area" as defined under the Revised General Plan.

Over the past few months, Luck Stone has also held discussions with representatives from the City of Fairfax (hereinafter, "City") to discuss the City's incorporation of three parcels it owns (MCPI #152-27-4798, 152-26-8334, and 152-16-8431 and, collectively, "City parcels")

into ZMAP 2009-0003, ZMAP 2009-0004, and SPEX 2009-0027 as well as process a Boundary Line Adjustment (hereinafter, "BLA") that would permit the City to own linear waterfront property ownership along its Goose Creek Reservoir while conveying property to Luck Stone to protect and extract subsurface diabase resources to the west. Such a BLA would enhance the protection of the Goose Creek Reservoir and assist both Luck Stone and the City in "straightening out" the individual parcel lines that were established before the Goose Creek Reservoir.

Lastly, per discussion with Staff members, Luck Stone is seeking the rezoning of approximately 81.5 acres of MCPI #151-16-0598 from PD-GI to MR-HI. While this acreage was included in ZMAP 1999-0004 as proffered open space, the Applicant is now seeking to incorporate approximately 20.15 acres of this parcel into SPEX 2009-0027 in order to provide a temporary and additional permanent access drives to access Luck Stone's properties west of Goose Creek as well as provide Loudoun Water with safe access to their planned water treatment plant.

Parcels ##152-25-5356, 153-35-5865, and 152-26-8334 are zoned Transitional Residential-10 ("TR-10") in their entirety, while approximately 5.54 acres of MCPI #152-36-1675 is zoned Joint Land Management Area-20 ("JLMA-20") and 110.75 acres is zoned TR-10. Parcel #151-37-7403 is zoned MR-HI in its entirety. Portions of the foregoing parcels located within the limits of special exception as discussed below and as shown on the Special Exception Plat are hereinafter referred to as the "Subject Properties."

In conjunction with ZMAP 2009-0003 and ZMAP 2009-0004, Luck Stone is submitting this special exception ("SPEX") application to:

- 1) Extend the 110-acre permitted quarry area of "Quarry D" approved under SPEX 1990-0019, ZMAP 1999-0004, and SPEX 1999-0006 to the south by both permitting "Stone Quarrying" uses for the Subject Properties pursuant to Section 3-1004(J) of the Zoning Ordinance and allowing the construction of the accessory uses associated with the proposed quarry operation as shown on the proposed Special Exception Plat submitted with this application dated July 31, 2009 and prepared by Dewberry & Davis, LLC (hereinafter, "Special Exception Plat"); and
- 2) Remove, as shown on the Special Exception Plat (and as approved Special Exception Development Plan dated April 4, 1990 prepared by Dewberry & Davis approved under SPEX 1990-0019), the southern buffer of Quarry D on Parcel #151-37-7403 approved under SPEX 1990-0019 to allow for the creation of a contiguous quarry pit area.

The proposed quarry pit area for the Subject Properties under this application is approximately 148.6 acres and, following approval of ZMAP 2009-0003, ZMAP 2009-0004, and SPEX 2009-0027, there will be a consolidated permitted quarry area (which includes the

approved "Quarry D" to the north of the Subject Properties) of approximately 257.1 acres as shown on the Special Exception Plat.

As shown in the following table, this special exception application incorporates all or a portion of the following five parcels (hereinafter, "Subject Properties"). The limits of special exception are not coterminous with the total acreage of the five parcels.

MCPI Number	Total Acreage	Acreage Included In SPEX 2009-0027	Proposed Zoning Per ZMAP 2009-0003/-0004	Owner
151-16-0598	137.03	20.15 ac.	MR-HI	Luck Stone
152-36-1675	116.27 ac.	116.27 ac.	MR-HI	Luck Stone
152-25-5356	69.92 ac.	69.92 ac.	MR-HI	Luck Stone
151-37-7403	148.41 ac.	6.02 ac.	N/A (existing MR-HI)	Luck Stone
153-35-5865	168.37 ac.	98.80 ac.	MR-HI (148.8 ac.) PD-GI (19.57 ac.)	Loudoun Water
152-26-8334	26.87 ac.	9.96 ac.	MR-HI (9.96 ac.) PD-GI (16.91 ac.)	City of Fairfax
Total Area Included in SPEX 2009-0027: All or a portion of 6 parcels (±321.12 acres)				

NOTE: 50 acres of MCPI #153-35-5865 is included in a separate companion special exception application (SPEX 2009-0021) for Water Treatment Plant uses filed by Loudoun Water. A boundary line adjustment has been filed concurrent with these land use applications in order to adjust the boundary of this parcel to generally coincide with boundary lines of the companion water treatment plant special exception use in the event that all related applications are approved.

II. Project Justification

Over the past few years, Luck Stone has worked with Loudoun Water to develop a long-range plan, known as the "Central Water Supply Program," for withdrawing water from the Potomac River and transmitting the water through pipelines for treatment and eventual storage in existing and future Luck Stone quarries. In the opinion of Loudoun Water, the existing and planned Luck Stone quarries are well-located to provide large capacity water storage for a proposed Potomac River water intake, and their use would permit Loudoun Water to pump and store raw water from the Potomac River during periods of normal and high river flow and withdraw water from the quarries when the water levels in the Potomac are low.

Studies examined by Loudoun Water indicate that the conversion of diabase rock quarries for water storage would not only accommodate Loudoun's growth in water demand for the foreseeable future, but would provide a sustainable source of water storage and benefit the

environment by reducing water withdrawals from the Potomac River and Goose Creek during times of drought and low flow. Luck Stone's partnership with Loudoun Water is key to implementing the "Central Water Supply Program" (adopted by Luck Stone and Loudoun Water on December 11, 2008) and reuse of existing and future quarries for public purposes has the potential to provide significant water storage capacity.

Luck Stone is fortunate in that many of the land uses in the vicinity of the Subject Properties have been developed or zoned for compatible quarrying, industrial, or institutional purposes, or are visually/geographically separated from non-compatible land uses by geographical or manmade features (i.e., Goose Creek, Route 659, etc.). Very few residential parcels exist within the vicinity of the Subject Properties. Nevertheless, land development has been constructed, approved, and/or proposed within the vicinity of the Subject Properties, diminishing the certainty that the County's remaining high-quality diabase rock resources will be protected and utilized. Merely identifying and determining the value of diabase mineral resources does not necessarily ensure that Loudoun County's mineral resources will be available for recovery. Prime quarry lands must also be properly mapped to a zoning district which permits mineral extraction, and the proposed rezoning seeks to protect, conserve, and reserve—from preemptive and incompatible residential land development—a significant amount of the remaining diabase resources of Loudoun County.

It is also critical that the extension of mineral extraction activities be permitted on identified quarry lands. The Applicant is requesting that the Subject Properties be granted the ability to ensure that mineral extraction can take place and that potential quarry pit areas be of sufficient size to maximize resource recovery. Adequate pit width is essential to the efficient operation of transport and loading equipment as well as the proper storage and efficient removal of overburden and related debris. Quarry size also directly influences tonnage and pit depth, as well as equipment selection, operating costs relative to production life, and diabase quality relative to production life. The size, distribution, and particle shape of quarry pits can differ from one quarry location to another, depending on the geological source of the rock, the crushing equipment used, and the method used for coarse aggregate separation.

Section 3-1007(E)(1) of the Zoning Ordinance provides that "[t]he pit wall of a quarry shall be a minimum of 1,000 feet from the MR-HI district boundary," except where "...quarries are adjacent to the PD-GI or CLI district, the setback may be reduced to a minimum of 50 feet." Strict implementation of a 1,000-foot buffer from the eastern and western edges of the proposed MR-HI zoning district to a future quarry limits on the Subject Properties will narrow the width of the potential quarry pit in a way that greatly reduces the function of quarry operations. This is particularly true on Parcel #153-35-5865, where a 1,000-foot setback from the eastern and western edges of the proposed MR-HI zoning district would effectively eliminate any potential for diabase recovery. While average pit widths in most quarries range from 1,500 feet to 3,000 feet, the imposition of a 1,000-foot buffer will reduce future pit widths on the Subject Properties to less than 100 feet. In certain instances, permissible quarry pit width will be reduced to 26 feet in width, rendering the Subject Properties unusable for mineral resource recovery.

The application of a 1,000-foot buffer—where unwarranted or where other unique mitigating circumstances are present that reduce the need for such a wide buffer—not only inhibits efficient use of Loudoun County's diabase resources, but also limits their potential to contribute to the County's economic development. Luck Stone's initial filing proposed a PD-GI protective strip along the eastern border of the three properties owned by Luck Stone and Loudoun Water in order to maximize future quarry pit limits. In its first referral comments, staff noted that given the proposed PD-GI strip's size and arrangement, the proposed PD-GI strip would be vacant, unusable land and would be inconsistent with the PD-GI district's purpose. Staff further noted that, given the TR-10 zoning of the City's parcels to the east (MCPI #152-27-4798, 152-26-8334, and 152-16-8431), such a PD-GI strip would have run counter to the intent of Section 3-1007(E), which serves to lessen negative impacts of quarry uses on non-compatible land uses.

Accordingly, Staff advised Luck Stone to provide the City parcels protection by including them in ZMAP 2009-0003 and ZMAP 2009-0004. As stated above, the forgoing applications incorporate the City's parcels and contemplate a BLA that would permit the City to own linear waterfront property ownership along its Goose Creek Reservoir while conveying property to Luck Stone to protect and extract subsurface diabase resources to the west. Subject to future boundary surveying work, post-exchange lands to be owned by the City (consisting of approximately 45.6 acres) are proposed to be zoned to the PD-GI zoning district and designated as a "300-foot no-build buffer" on the Concept Development Plan for ZMAP 2009-0003. The post-exchange lands to be owned by Luck Stone (consisting of approximately 9.96 acres) are proposed to be rezoned to the MR-HI zoning district and be permitted for quarry uses.

The proposed PD-GI zoning will comprise an incremental addition to the City's water treatment plant parcel east of Goose Creek, MCPI #153-48-3134, which is also zoned PD-GI. This zoning scenario not only provides allows for a less-intensive use and a transition from MR-HI uses to the west, but also provides the City of Fairfax with a consistent zoning district for a majority of its Goose Creek area properties. Moreover, because the proposed PD-GI rezoning to the east will reduce the eastern 1,000-foot buffer for the future quarry limits to 50 feet, it also serves to enhance the efficient use of the underlying diabase to the west. The range of uses permitted in the proposed PD-GI area is generally compatible with the uses permitted to the east and those MR-HI uses permitted to the west under ZMAP 2009-0005 and SPEX 2009-0009. Lands to the north and east are mapped MR-HI, PD-GI, and PD-IP, while lands to the west and south are proposed to be zoned MR-HI. Additionally, Luck Stone's proposed 300-foot "no build" scenic buffer combined with the width of the Goose Creek (which ranges from 350 feet to 450 feet) provides adequate protection for adjacent properties. Concurrently, the eastern ultimate pit wall location has been moved to coincide with the requirements associated with the anticipated placement of this PD-GI rezoning.

The proposed quarry pit area for the Subject Properties under this application is approximately 148.6 acres and, following approval of ZMAP 2009-0003, ZMAP 2009-0004, and SPEX 2009-0027, there will be a consolidated permitted quarry area (which includes the approved "Quarry D" to the north of the Subject Properties) of approximately 257.1 acres as

shown on the Special Exception Plat. As a component of this application, the approximately 6.36-acre area housing the 200-foot southern buffer of Quarry D on Parcel #151-37-7403 approved under SPEX 1990-0019 (and as approved Special Exception Development Plan dated April 4, 1990 prepared by Dewberry & Davis approved under SPEX 1990-0019), is necessarily proposed to be removed so as to allow for the creation of a 233-acre contiguous quarry pit area.

The land use plan for the future quarry area will be well-buffered by substantial perimeter berms with landscaping to limit the visual impact of the quarry on the surrounding properties as detailed in the Special Exception Plat. Further, Luck Stone anticipates that any future quarrying activity on the Subject Properties will be in line with past practices and will protect existing and planned neighboring uses from potential negative impacts of its resource extraction activities.

Due to the potential for residential development on adjacent properties located to the west, as well as the possibility that future homes might be located within proximity of the quarry limits, Luck Stone is retaining the 1,000-foot setback from the western boundary of the Subject Properties for the quarry pit wall limits. This boundary creates a space consisting of approximately 100 acres and is presently planned for overburden placement during the mining process. Luck Stone is also proposing that the western boundary of the quarry pit wall be automatically permitted to extend west in the future should property to the west become zoned MR-HI or PD-GI.

Issues related to the policies and recommendations of the Revised General Plan, including the Transition Policy Area (Chapter 8), Mineral Resource Extraction Policies (Chapter 5), and general Green Infrastructure policies, were included in the Luck Stone's ZMAP application (ZMAP 2009-0003) Statement of Justification and are incorporated herein.

III. Environmental Considerations

The Subject Properties contain a mixture of open fields and a combination of evergreen and deciduous forested areas, moderate and very steep slopes, as well as two farm ponds. Some portions contain major floodplain and wetlands that are subject to the Floodplain Overlay District and US Army Corps of Engineers regulations. Any disturbance within the designated wetland areas will be permitted with the Army Corps of Engineers prior to site plan approval. No clearing or grading associated with the above proposals will be allowed within the minimum 300-foot setback along the Goose Creek, as shown on the Special Exception Plat.

Although a number of archeological sites were recorded during the cultural resource investigations conducted on the Subject Properties, only one archeological site (#44LD1324), located on MCPI #153-35-5865, was recommended for further study if impacts were to occur. A Phase II study conducted for the site by Thunderbird Archaeology in accordance with the 2009 DHR Guidelines for Archeological investigations indicated disturbance at the site. Additionally, the field supervisor and principal investigator met or exceeded the Secretary of Interior's Standards. Most of the artifacts were recovered from secondary, post occupational deposits. The

site is not considered to be eligible for the National Register of Historic Places and no additional archeological work is recommended. A report submitted with ZMAP 2009-0004, "Phase II Archeological Evaluation of Site 44LD1324," is included for Staff's review.

Luck Stone's quarry operations are a valuable and important industry that supports many other industries in the County, and the company remains committed to responsible mining techniques and sustainable development. The company's Environmental Management System ("EMS") provides a structured means to measure and manage environmental performance of the proposed quarry and provides a platform for continuous improvement and "beyond compliance" environmental performance.

Luck Stone has received numerous environmental awards and is a recognized leader within the mining industry for environmental stewardship. The company not only seeks to produce minerals in a way that causes the least environmental harm and conveys maximum advantage to the environment and society, but also seeks to achieve the environmental benefits associated with carbon management, biodiversity and community relations. Assessing the amount of energy used in the production and distribution of Luck Stone's materials is not only good for the environment, but assists Luck Stone in better energy utilization and smoother production processes.

From blasting, to mining, to shipping, the company recognizes the role it plays in conserving energy as much as possible, especially in reducing the carbon footprint of transporting its materials to the end-user and supplying aggregate products in an environmentally-friendly way (i.e., using GPS to improve fleet utilization, adopting logistics management solutions for supply chain efficiency, instructing drivers safe/fuel-efficient driving techniques, etc.). Not only are locally-serving diabase rock quarries (including the proposed special exception) crucial for the long-term economic development of Loudoun County, but the Subject Properties' close proximity to the end-user and ability to capitalize on the availability of existing processing equipment at the adjacent Leesburg Plant will greatly assist in reducing the environmental impact of both the quarry and the particular construction job.

If the proposed special exception is approved, Luck Stone will work to promote the safe and efficient design of the surface excavations on the Subject Properties and will seek to reduce environmental disturbance from blasting, including minimizing levels of vibration, particularly near blast locations. Additionally, Luck Stone will work to reduce energy levels during comminution (crushing and grinding) and employ efficient processes that will use higher efficiency and reduce its energy consumption.

IV. Description of Transportation Issues

Access to the Subject Properties will be provided either via Belmont Ridge Road (Route 659) or Cochran Mill Road (Route 653), both of which have direct or secondary access to Route 7 to the north and the Dulles Greenway (Route 267) to the south. Under Proffer 10 and Condition

18 of ZMAP 1999-0004 and SPEX 1999-0006, respectively, Luck Stone is prohibited from using Cochran Mill Road (Route 653) for transporting quarried rock. Luck Stone is amenable to a similar proffer/condition applicable to this application. Cochran Mill Road is presently a variable-width paved and unpaved road. Belmont Ridge Road is presently a two-lane undivided paved collector road, and it is Luck Stone's understanding that the Virginia Department of Transportation is presently working to widen the road to a four-lane section between Route 7 and the Dulles Greenway.

The volume of quarry-related truck traffic is directly tied to market demand and, since the proposed extension of the quarry use will not increase the intensity of crushed stone production or the sales volume, and considering that market demand will not change as a result of the approval of this application, the quarry extension will serve only to extend the functional life of the existing Leesburg Plant quarry operation while protecting the diabase assets with appropriate zoning entitlements. Accordingly, and as discussed in the Transportation Analysis prepared by Patton, Harris, Rust & Associates, Luck Stone does not foresee additional business activity or any increases in vehicle trips by virtue of approval of ZMAP 2009-0003, ZMAP 2009-0004, or SPEX 2009-0027 over that which has been previously approved.

IV.A. Primary Access: Tunnel

In conjunction with this request, Luck Stone has proposed a special exception to revise conditions 14 through 19 approved under SPEX 1990-0019 to permit a below-grade inter-quarry tunnel access road, rather than the approved conveyor/bridge, to serve as the primary connection between the approved and proposed quarries on the west side of Goose Creek and the existing Leesburg quarry and crushing operations on the east side of Goose Creek. This request was previously made in conjunction with SPEX 2009-0027; however, at the request of Staff, Luck Stone has agreed to segregate this request from the larger quarry request.

IV.B. Emergency/Service Access

Notably, SPEX 1990-0019 included the approval of one access point across Sycolin Creek along Cochran Mill Road, which was contemplated to be permanently used for emergency and intermittent access by approximately 10 employees, company maintenance vehicles, and supply vendors. In recent years however, Luck Stone has evaluated the feasibility of the approved crossing in light of recent stream mitigation efforts along Sycolin Creek, engineering costs, significant topographic challenges, as well as the future needs of Luck Stone's proposed quarry extension by virtue of this application.

In consideration of these physical and environmental factors, Luck Stone now proposes that emergency and intermittent service access for the Subject Properties be provided via a private road constructed on a new alignment between Cochran Mill Road and Gant Lane. As shown on the Special Exception Plat and the Concept Development Plan for ZMAP 2009-0003,

the proposed road will run through a portion of MCPI #151-16-0598 and will traverse the Sycolin Creek floodplain at its narrowest point. This new road, the location of which was selected to minimize disturbance of wetlands and floodplain, will provide emergency and intermittent service access for a maximum of 10 Luck Stone employees per day. As noted above, no transportation of quarried rock will occur through this access point. Luck Stone will not use any portion of Gant Lane for access.

While this parcel was included in ZMAP 1999-0004 as proffered open space, Luck Stone is incorporating this area into ZMAP 2009-0003 in order to unify the zoning administration of all Luck Stone properties. The balance of MCPI #151-16-0598 not used for road purposes, in addition to an approximately 14.7-acre portion of MCPI #152-36-1675 located between the Sycolin Creek Floodplain and Cochran Mill Road, will remain as open space until a superseding ZCPA is approved by the Board of Supervisors.

Notably, the traffic analysis for SPEX 1990-0019, by Callow Associates, Inc., had conservatively estimated approximately 25 A.M. and P.M. peak directional trips turning to the Luck Stone access on Route 653, to provide maintenance and employee access to the properties west of the Goose Creek. These volumes exceed the anticipated activities, and could be accommodated with proposed access improvements in coordination with the pending Loudoun Water application.

In addition to assisting Luck Stone, the new permanent road will also provide improved access to the proposed water treatment plant for up to 20 Loudoun Water employees and an average of two trips per day for truck deliveries and service vehicles. The southern portion of Gant Lane will continue to provide Loudoun Water employees access to the water treatment plant via the private road proposed on MCPI # 153-35-5865 as noted in the submittal materials for ZMAP-2009-0004 and SPEX-2009-0021.

V. Special Exception Review Criteria

Section 6-1310 of the Zoning Ordinance contains evaluation criteria for approval of SPEX applications and, in considering this application, the following enumerated factors shall be given reasonable consideration. The Zoning Ordinance specifies that an applicant is to address each factor in its statement of justification (unless any such criteria are deemed inapplicable to the application).

A) Whether the proposed special exception is consistent with the Comprehensive Plan.

Issues related to the policies and recommendations of the Revised General Plan, including the Transition Policy Area (Chapter 8), Mineral Resource Extraction Policies (Chapter 5), and general Green Infrastructure policies, were included in the Applicant's ZMAP application (ZMAP 2009-0003) Statement of Justification and are incorporated herein. As stated in that document, the proposed special exception for stone quarrying

uses is consistent with the Revised General Plan and the Countywide Transportation Plan.

- B) Whether the proposed special exception will adequately provide for safety from fire hazards and have effective measures of fire control.**

The proposed stone quarrying use is a heavy industrial use, which involves only resource extraction activities concerning the Subject Properties' subterranean diabase rock. All fire control measures required pursuant to the applicable codes, including from the Virginia Department of Mines, Minerals, and Energy, will be provided or extended for the proposed quarry. Any use of explosives will be in strict conformance with all applicable federal, state and local regulations. Blasting operations will be performed by individuals who are certified by the Virginia Department of Mines, Minerals, and Energy. Explosives will be stored in strict accordance with Federal Explosives Law and Regulations (ATF P5400.7) (11/07). A permit allowing for storage is currently held by Luck Stone Corporation for its Leesburg Plant. Luck Stone will also continue in its support of the primary-serving fire and rescue facilities serving the Subject Properties.

- C) Whether the level and impact of any noise emanating from the site, including that generated by the proposed use, negatively impacts the uses in the immediate area.**

The consolidated quarry special exception area will be buffered by property owned by Luck Stone or Loudoun Water. Blasting activities will be conducted in accordance with performance standards set forth in the Zoning Ordinance and as required pursuant to the Virginia Department of Mines, Minerals, and Energy permit. No off-site noise impacts are anticipated which will detract from the quality of life held by adjacent and nearby properties. The blasting period is restricted to certain times during the day and the Applicant will commit to this procedure.

- D) Whether the glare or light that may be generated by the proposed use negatively impacts uses in the immediate area.**

No light spillage to off-site properties is anticipated for establishment of the proposed stone quarrying use. All lighting performance standards set forth in the Zoning Ordinance will be observed by the Applicant.

- E) Whether the proposed use is compatible with other existing or proposed uses in the neighborhood, and adjacent parcels.**

The proposed special exception application use is compatible with the immediately adjacent permitted stone quarry sites known as "Quarry D" and the Leesburg Quarry. Other parcels, in the vicinity of the Subject Properties will not be disrupted by the proposed stone-quarrying use. A large landscaped perimeter berm will be constructed

around the majority of the perimeter of the proposed quarry pit to provide both aesthetic, acoustical, and safety protections as shown in the Special Exception Plat.

- F) Whether sufficient existing or proposed landscaping, screening and buffering on the site and in the neighborhood to adequately screen surrounding uses.**

Areas with 10 foot to 20-foot high landscaped perimeter berms will be established generally around the quarry site. Upon completion, each berm system will have significant vegetation and screening measures planted upon them that will serve to reduce noise and visual impacts of the quarry operation.

- G) Whether the proposed special exception will result in the preservation of any topographic or physical, natural, scenic, archaeological or historic feature of significant importance.**

The Applicant's evaluation of the Subject Properties (Phase I Study) did not reveal any historical or archaeological features of any significant importance. The proposed special exception application will implement the open space provisions of the Revised General Plan and maintain a balance between the built and natural environment. A 300 foot no-build buffer will be provided along Goose Creek, providing for a continued open space network and visual buffer between the proposed development and this state-designated scenic river. Additional open space and natural open space will be maintained along the buffer portions of the Subject Properties. The Subject Properties' existing stands of trees slated for preservation are primarily located within the planned 300-foot buffer. There are no known endangered plant or animal species on the Subject Properties, nor are there any known significant historic or archaeological features on the Subject Properties.

- H) Whether the proposed special exception will damage existing animal habitat, vegetation, water quality (including groundwater) or air quality.**

The Subject Properties contains a number of environmental features, including floodplain, wetlands, moderate and very steep slopes and forested areas. The Applicant's evaluation of the Subject Properties (Phase I Study) did not reveal any historical or archaeological features of any significant importance. The environmental quality corridor adjacent to the Goose Creek and its associated floodplain area will be preserved within the proposed 300-foot buffer.

- I) Whether the proposed special exception at the specified location will contribute to or promote the welfare or convenience of the public.**

Diabase rock is essential to the long-term economic viability of the region and by preserving a local nonrenewable resource—namely high-quality non-renewable diabase stone—for local commercial and residential purposes, Luck Stone's proposed special exception application will benefit the residential and business communities within

Loudoun County. The existence of a nearby family-owned diabase rock quarry within proximity to Loudoun's residents offers the public the ability to conveniently access needed supplies and resources locally, thereby reducing the environmental impact of both the quarry and the particular construction job.

- J) Whether the traffic expected to be generated by the proposed use will be adequately and safely served by roads, pedestrian connections and other transportation services.**

Under Condition 18 under SPEX 1999-0006, Luck Stone is effectively permitted to transport quarried rock material only via Route 659 (Belmont Ridge Road), and Luck Stone anticipates only using Route 659 for truck access in the future. Additionally, because the volume of quarry-related truck traffic is directly tied to market demand and market demand will not change as a result of this special exception, there will be no increase in product output or vehicular trips as a result of the proposed application. Further, since the proposed extension of the quarry use will not increase the intensity of crushed stone production or the sales volume, the result of the extension will be extension of the active life of the consolidated quarry.

- K) Whether, in the case of existing structures proposed to be converted to uses requiring a special exception, the structures meet all code requirements of Loudoun County.**

Not applicable. The existing structures on the Subject Properties will be utilized for quarry uses, such as night watchman's quarters, or be demolished.

- L) Whether the proposed special exception will be served adequately by essential public facilities and services.**

No new infrastructure (i.e., water and sewer service) is proposed to serve the proposed quarry extension.

- M) The effect of the proposed special exception on groundwater supply.**

The proposed special exception will not have an effect on the County's groundwater supply, and any future stone quarrying use proposal will include a detailed Hydrogeologic Assessment of the Subject Properties. Best Management Practices will be utilized to accommodate surface water runoff and will include the implementation of Low Impact Development techniques to maximize and protect groundwater recharge. A Preliminary Hydrogeologic Report is submitted with this application as prepared by Analytical Services, Inc.

- N) Whether the proposed use will affect the structural capacity of the soils.**

This special exception application proposes removal of the topsoil and overburden resting the top to the subterranean diabase rock and calls for utilization of this overburden for perimeter berm-building purposes. In light of the proposed quarry use, the structural capacity of these soils is technically irrelevant.

- O) Whether the proposed use will negatively impact orderly and safe road development and transportation.**

As indicated in the Patton, Harris, Rust & Associates Transportation Analysis, the proposed quarry use will not produce any substantial transportation impacts to nearby roads.

- P) Whether the proposed special exception use will provide desirable employment and enlarge the tax base by encouraging economic development activities consistent with the Comprehensive Plan.**

As previously mentioned, this special exception will protect a non-renewable Loudoun County resource, namely high-grade diabase rock, for a future economic use to the benefit of Loudoun County and its citizens. Approval of these applications will produce significant real property tax revenue to Loudoun County, through the payment of annual property taxes.

- Q) Whether the proposed special exception considers the needs of agriculture, industry, and businesses in future growth.**

The proposed quarry use special exception will allow for subterranean diabase rock assets to be utilized by Loudoun County industry, agriculture, and businesses. Stone resources are critical for use in a growing jurisdiction and are not amenable to long-distance transportation. As a result, locally-serving diabase rock quarries are crucial for the long-term economic development of a growing jurisdiction.

- R) Whether adequate on and off-site infrastructure is available.**

Adequate on and off-site infrastructure is available; however Luck Stone intends to construct a perimeter access road around the proposed quarry.

- S) Any anticipated odors which may be generated by the uses on site, and which may negatively impact adjacent uses.**

The Applicant does not anticipate any odors that will be generated by the proposed use.

- T) Whether the proposed special exception uses sufficient measures to mitigate the impact of construction traffic on existing neighborhoods and school areas.**

Because the Subject Properties have direct access to Belmont Ridge Road (Route 659), Cochran Mill Road (Route 653), and Gant Lane (Route 652), construction access to the site can be accomplished without any impact upon residential neighborhoods and school areas.

VI. Conclusion

For the foregoing reasons, Luck Stone Corporation respectfully submits that the Subject Properties are appropriate for stone quarrying uses as proposed in conjunction with the proposed MR-HI and PD-GI rezoning application pursuant to ZMAP 2009-0003 and ZMAP 2009-0004. Luck Stone's proposal is in conformance with all applicable elements of the Revised General Plan and would provide a vehicle for protecting the nonrenewable diabase rock resource for future economic development utilization, and would provide an opportunity for optimizing water service to the central water supply system of the County. No additional vehicle trips are anticipated by virtue of this proposal as it relates to future stone quarrying use, and relatively few trips are anticipated with Loudoun Water's proposed water treatment plant.

L0189507.DOC

PROFFER STATEMENT

ZMAP 2009-0003

LUCK STONE QUARRY EXTENSION

**LUCK STONE CORPORATION AND
LOUDOUN WATER (d/b/a LOUDOUN COUNTY SANITATION AUTHORITY) AND
CITY OF FAIRFAX**

May 6, 2010

August 27, 2010

Luck Stone Corporation, a Virginia Corporation (hereinafter, "Luck Stone"), as the owner of certain property described as Loudoun County Tax Map Parcels 61-10 (MCPI #152-36-1675), 61-9 (MCPI #152-25-5356), and 61-8 (MCPI #151-16-0598), Loudoun Water (d/b/a Loudoun County Sanitation Authority), a state chartered authority, as the owner of certain property described as Loudoun County Tax Map Parcel 61-15 (MCPI #153-35-5865), and the City of Fairfax, a municipal corporation (hereinafter, "City"), as the owner of certain property described as Loudoun County Tax Map Parcels 61-9B (MCPI #152-27-4798), 61-9A (MCPI #152-26-8334), and 61-20A (MCPI #152-16-8431) (hereinafter, all seven parcels are jointly, the "Property" and Luck Stone, Loudoun Water, and the City are jointly, the "Applicant"), hereby voluntarily proffer, pursuant to Section 15.2-2303 of the Code of Virginia (1950), as amended, and Section 6-1200 of the Revised 1993 Loudoun County Zoning Ordinance, that in the event the Property is rezoned by the Board of Supervisors of Loudoun County, Virginia (the "County") to the Mineral Resource—Heavy Industry ("MR-HI") and Planned Development—General Industrial ("PD-GI") zoning districts as shown on the plan set (identified below), the development of the Property will be in substantial conformance with the following terms and conditions. The special exception uses for Stone Quarrying in the MR-HI Zoning District, as proposed in SPEX 2009-0027, are also sought for the Property in tandem with ZMAP 2009-0004. Substantial conformity shall include modifications pursuant to good engineering practices and environmental conditions, in recognition that the quarry location is approximate depending on the location of existing mineral resources.

I. LAND USE

- A. Concept Development Plan ("CDP").** The Property shall be developed in substantial conformance with Sheets 1, 10, 11, and 12 of 16 of the CDP titled "Luck Stone Corporation: Leesburg Plant, Zoning Map Amendment Petition, Quarry D Extension" prepared by Dewberry dated June 1, 2009, and revised through August 26, 2010, which is incorporated herein by reference as Exhibit 1.
- B. MR-HI Areas.** For those MR-HI areas of the Property not subject to Proffer I.D of this Proffer Statement, MR-HI by-right and special exception land uses of "Agriculture, horticulture, forestry, or fishery," "Excavation, mining, dredging, stripping," "Park," "Water pumping station," "Crushing, treating, washing, and/or processing of materials, accessory to a quarry operation, when conducted on the same property," "Crushing, treating, washing, and/or processing of materials," "Utility Lines," "Sewage pumping station", "Stone Quarrying," "Water treatment plant," and "Water storage tank," including any accessory uses (which may include without limitation, generators, fuel storage tanks, water storage tanks, telecommunications towers and other uses accessory to the water treatment plant), may be located anywhere within the portion of the property labeled "Proposed MR-HI," and consistent with the Rezoning Plat and any applicable Special Exception Plat.
- C. PD-GI Open Space Area Along Goose Creek.** The land area depicted on Sheets, 11 and 12 of 16 of the CDP, as "300' No Build Buffer per Comprehensive Plan" along Goose Creek shall be kept in open space purposes as a "no-build" buffer area. With exception of the travel ways and utilities shown on the CDP, no land development activities shall be permitted in this area except for agricultural uses, a Goose Creek Scenic Trail as described in Proffer II.B of this Proffer Statement, activities necessary to the maintenance of the Goose Creek and Goose Creek Reservoir, subsurface utility line extensions that will not disturb existing vegetation within the buffer area, and forest/tree maintenance in accordance with forestry and silviculture practices approved by the County Urban Forester."

D. MR-HI Open Space Area Between Sycolin Creek and Cochran Mill Road (“Route 653”). As shown on Sheet 11 and 12 of 16 of the Concept Development Plan, portions of the Property situated between Sycolin Creek and Route 653 shall be kept in open space purposes as a “no-build” buffer area, and the Applicant reserves the right to amend these Proffers and associated Concept Development Plan in the future to permit development thereon. During the period of time in which this portion of the Property is reserved for open space purposes, with the exception of the travelways shown on the CDP, no land development activities shall be permitted between Sycolin Creek and Route 653 except for agricultural uses, a Sycolin Creek Scenic Trail as described in Proffer II.D of this Proffer Statement, the location of utility lines, and forest/tree maintenance in accordance with forestry and silviculture practices approved by the County Urban Forester.

II. ENVIRONMENTAL

A. Existing Undisturbed Forested Areas. Within the areas identified as “Approximate Tree Save Areas” on Sheets 10, 11, and 12 of 16 of the CDP, the Applicant shall preserve healthy trees, provided, however, that trees may be removed to the extent necessary for the constructions of trails, utilities, and storm water management facilities, roads (as shown on the CDP), and grading activities associated with any activities that are required pursuant to this Proffer Statement and/or shown on the approved construction plans and profiles as lying within such “Tree Save Areas” and for the construction of utilities necessary for development of the Property. Additionally, the Applicant may selectively clear any dead, damaged, dying or diseased trees and vegetation, or any tree or vegetation that interferes with the functioning of any utility or drainage easement or that poses a safety hazard, upon consultation with the County Urban Forester prior to the removal of any such vegetation.

B. Goose Creek Scenic Trail. The Applicant shall dedicate a 10 foot-wide public access easement to the benefit of the County along the Property’s frontage on the west side of Goose Creek. The easement may be located anywhere within 50 feet from the scar line of Goose Creek for the purpose of providing public access along Goose Creek as part of a

regional Goose Creek Trail system. This easement area shall generally remain in a natural state to be used for walking or hiking purposes only and with only minor clearing and natural surface trails constructed in the easement area. There will be no lighting of the trail, no paved surfaces, no bicycles and no camping permitted within the easement area, and any encroachments shall be limited to the location of utilities and road crossings. The proposed trail may be field located in conjunction with County staff and the easement shall be dedicated upon cessation of quarrying activities or sooner at the election of the Applicant.

C. Sycolin Creek Scenic Trail. The Applicant shall dedicate a 10 foot-wide wide public access easement to the benefit of the County along the Property's frontage on the west side of Sycolin Creek. The easement may be located anywhere within 50 feet from the scar line of Sycolin Creek for the purpose of providing public access along Sycolin Creek. This easement area shall generally remain in a natural state to be used for walking or hiking purposes only and with only minor clearing and natural surface trails constructed in the easement area. There will be no lighting of the trail, no paved surfaces, no bicycles and no camping permitted within the easement area, and any encroachments shall be limited to the location of utilities and road crossings. The location of the proposed trail may be field located in conjunction with County staff, and the easement shall be dedicated upon cessation of quarrying activities or sooner at the election of the Applicant.

D. Sycolin Creek Habitat Enhancement. The Applicant shall establish a reforestation area along the Sycolin Creek floodplain ("Reforestation Area") as shown on the CDP for the protection of, and to limit land disturbance adjacent to, the floodplain on the western portion of the Sycolin Creek as shown on the CDP. If the Reforestation Area is denuded or otherwise void of vegetation, the Applicant shall perform reforestation by planting 100 deciduous and evergreen trees per acre, all of which shall be native plant species. Only uses and improvements related to clearing and grading for access roads, utilities, or other construction activities related to the quarry shall be permitted in the Reforestation Area,

and only those uses listed in the Zoning Ordinance under the definition of “Passive Recreation Uses” shall be permitted within the Reforestation Area. The approved reforestation plan will be implemented concurrent with development of the area(s) immediately adjacent to the creek, and shall be submitted for review and approval by the County Urban Forester.

III. PROFFER FULFILLMENT & BINDING EFFECT

- A. **Signatures.** The undersigned parties hereby warrant that all of the owners of a legal interest in the Property have signed this Proffer Statement, that they possess full authority to bind the Property to these conditions, and that the Proffers are entered into voluntarily.

[SIGNATURE PAGES TO FOLLOW]

LUCK STONE CORPORATION
Fee Simple Owner of LCTM 61-8 (MCPI #151-16-0598)
and 61-6C (MCPI #151-36-0620)

By: _____
Name: Mark Peterson
Title: Real Estate Manager

STATE OF _____
COUNTY OF _____, to wit:

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Mark Peterson, as Real Estate Manager of Luck Stone Corporation, whose name is signed to the foregoing, appeared before me and personally acknowledged the same in my jurisdiction aforesaid.

GIVEN under my hand and seal this _____ day of _____, 2010.

My Commission Expires:

Notary Public

**LOUDOUN WATER (d/b/a LOUDOUN COUNTY
SANITATION AUTHORITY)
Fee Simple Owner of LCTM 61-15 (MCPI #153-35-
5865)**

By: _____
Name: Dale C. Hammes
Title: General Manager

STATE OF _____
COUNTY OF _____, to wit:

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Dale C. Hammes, General Manager of Loudoun Water (d/b/a Loudoun County Sanitation Authority), whose name is signed to the foregoing, appeared before me and personally acknowledged the same in my jurisdiction aforesaid.

GIVEN under my hand and seal this _____ day of _____, 2010.

My Commission Expires:

Notary Public

CITY OF FAIRFAX
Fee Simple Owner of LCTM 61-9B (MCPI #152-27-4798), 61-9A (MCPI #152-26-8334), and 61-20A (MCPI #152-16-8431)

By: _____
Name: Robert Sisson
Title: City Manager

STATE OF _____
COUNTY OF _____, to wit:

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, do hereby certify that Robert Sisson, City Manager for the City of Fairfax, whose name is signed to the foregoing, appeared before me and personally acknowledged the same in my jurisdiction aforesaid.

GIVEN under my hand and seal this _____ day of _____, 2010.

My Commission Expires:

Notary Public

SUGGESTED SPECIAL EXCEPTION CONDITIONS OF APPROVAL

SPEX 2009-0027

LUCK STONE CORPORATION

August 27, 2010

NOTE: It is the intent of the Applicant to expand its previously-approved "Quarry D" on the west side of Goose Creek. The term "Subject Property," as used herein, applies only to those areas included within the limits of special exception as shown on the Special Exception Plat, as noted in Condition 1 below.

1. The stone quarrying primary use and accessory uses allowed on the Subject Property shall be conducted in substantial conformance with the Special Exception Plat, prepared by Dewberry, dated July 31, 2009, as revised through August 26, 2010 (hereinafter referred to as "the Plat"). Recognizing that the quarry location is approximate depending on the location of existing mineral resources, substantial conformity shall include modifications to the limits of the quarry and related permitted uses pursuant to good engineering practices and environmental conditions.
2. Approval of SPEX 2009-0027 and imposition of these development conditions shall neither invalidate the special exception approvals granted in SPEX 1990-0019 or SPEX 1999-0006 nor replace the development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006, both of which shall remain valid after the County approval of SPEX 2009-0027. However, within the crosshatched are the special exception plat, all conditions of previously approved SPEX 1990-0019 shall remain in effect except that the 200-foot wide buffer/berm along the southern side of the site, as specified in Condition #10 of SPEX 1990-0019, shall not be required.
3. The requested MR-HI special exception land uses of "Stone Quarrying" and "Crushing, treating, washing and/or processing of materials" may be located anywhere within the portion of the Property "Proposed Quarry D Expansion Area" and "Overburden Placement Area."
4. At no time shall truck traffic transporting extracted stone products from the Property use or have access to Gant Lane (Route 652) or Cochran Mill Road (Route 653). Any extracted stone products from the Property shall be transported off-site via the Goose Creek Bridge approved in SPEX 1990-0019 or, if approved, the Goose Creek inter-quarry tunnel as proposed in SPEX 2010-0013.

5. The Applicant shall limit all blasting operations to Mondays through Fridays between the hours of 8:00 a.m. and 5:00 p.m. except in the case when a blasting charge has been set before 5:00 p.m. and is then delayed. In such a case, the Applicant may then complete the blast after 5:00 p.m., but no later than 30 minutes after sunset.
6. The Applicant shall dedicate land along the Route 659 frontage of MCPI #152-39-5797 sufficient to accommodate a total half-section of VDOT's Route 659 Belmont Ridge Road Improvement project #0659-053-262, PE 102, RW202, RW204, C502, C504.
7. The existing low-water farm lane bridge on MCPI #151-16-0598 over Sycolin Creek shall be removed by the Applicant upon completion of the proposed permanent Cochran Mill/Gant Lane private bridge.
8. Upon the request of the County, the Applicant shall dedicate to the County, at no cost to the County, right-of-way along the Property's frontage along Route 659 so as to accommodate a one-half section as needed for the Virginia Department of Transportation's ("VDOT") Route 659 Belmont Ridge Road Improvement project #0659-053-262, PE 102, RW202, RW204, C502, C504. Consistent with this dedication, the Applicant shall provide any necessary construction-related (drainage, utility, construction, etc.) easements in mutually-agreed upon locations. Dedication of this right-of-way and provision of necessary easements shall occur at the written request of the County upon approval of the Route 659 construction plans, with final dedication plats to be prepared by others.
9. The Applicant shall pay the full costs for the design and installation of a traffic signal at the Route 659 intersection with Luck Lane when VDOT traffic warrants for said signal are met, or upon request by the VDOT or the County. If the existing Luck Stone site entrance is relocated to a future location elsewhere that is opposite another road entrance as a part of VDOT's Route 659 Belmont Ridge Road Improvement project (#0659-053-262, PE 102, RW202, RW204, C502, C504), then the Applicant shall be responsible for 50 percent of the costs of installation of such traffic signal.
10. Subject to VDOT approval and acquisition of any necessary utility easements, the Applicant shall construct, at no cost to the County, a right turn lane at the Luck Lane/Route 659 intersection as depicted on the CDP. Additionally, subject to VDOT approval, the Applicant shall install, at no cost to the County, an advance flashing warning signal and reduced 35 miles per hour speed limit signs along Route 659 in the vicinity of the Route 659/Luck Lane intersection. To improve sight distance issues in the vicinity of the intersection, the Applicant shall clear any trees/vegetation located on Loudoun County Tax Map Parcel 61-A6-F (MCPI #152-29-1504), on the inside of the existing curve (on the east side of Route 659), as suggested by VDOT and

subject to permission by the owner of that parcel including, if necessary, a permanent sight distance easement from said owner.

11. The Applicant shall dedicate to the County a minimum of 35 feet of right-of-way from the existing centerline of Cochran Mill Road (Route 653) along the Property's Route 653 frontage as depicted on the CDP, and shall provide any necessary construction-related (drainage, utility, construction, etc.) easements in mutually-agreed upon locations. Dedication of this right-of-way and provision of necessary easements shall occur upon the written request of the County.
12. The Applicant shall dedicate to the County a minimum of 25 feet of right-of-way from the existing centerline of Gant Lane (Route 652) along the Property's Route 652 frontage as depicted on the CDP, and shall provide any necessary construction-related (drainage, utility, construction, etc.) easements in mutually agreed upon locations. Dedication of this right-of-way and provision of necessary easements shall occur upon the written request of the County.
13. The Applicant shall submit a site plan, construction plans and profiles (CPAP), and/or grading plan (whichever is applicable) prior to commencing any land disturbing activities on the Subject Property.
14. A buffer area shall be reserved on the southern side of Sycolin Creek between the Sycolin Creek Floodplain and the Operations Road next to the quarry as generally as shown on the Plat.
15. The generalized boundary of the ultimate quarry pit limit shall be as shown on the Plat. This boundary shall be maintained during active quarrying
16. The Applicant shall construct a fence, consisting of a four (4) foot woven wire fence with two (2) strands of barbed wire for a total of five (5) feet or as otherwise agreed to by staff and the Applicant during site plan review, around the Subject Property generally proximate with the active operational quarry area. The location of said fence, as well as details, may be shown on any site plan and or grading plan applications and may be modified pursuant to good engineering practices and environmental conditions. Such fencing shall be installed as the quarry operation expands.
17. The Applicant shall ensure that all berms and overburden storage areas, as shown on the Plat, are seeded and landscaped to protect against erosion and will meet all adopted Loudoun County Facilities Standards Manual (FSM) requirements.
18. The Applicant shall incorporate stormwater management methods, inclusive of Best Management Practices (BMPs), in the design of the site plan in

accordance with the adopted Loudoun County Facilities Standards Manual (FSM).

19. The Applicant shall provide air quality monitoring stations in accordance with requirements and conditions established by the State Air Pollution Control Board. The data from these stations shall be provided to the following County of Loudoun agencies for review on a periodic basis according to a submission schedule established by the State Air Pollution Control Board: (1) Department of Health; and (2) Department of Building and Development.
20. The Applicant shall comply with the stone quarrying extraction and mining standards as contained in Section 5-1506 of the Revised 1993 Loudoun County Zoning Ordinance ("Zoning Ordinance").
21. The Applicant shall provide a copy of the Development Plan and Reclamation Plan, both as filed with the Virginia Department of Mines, Minerals, and Energy ("DMME"), concurrent with the submission of the first site plan and/or grading plan for stone quarrying uses.
22. Following cessation of quarrying activities, the Applicant shall restore the Subject Property in general conformance with the Reclamation Plan and Sheet 7 of the Special Exception Plat. Within five years prior to the conclusion of quarrying activities on the Subject Property, the Applicant will present an second Reclamation Plan further identifying anticipated successor users of the Subject Property, which may include the public.
23. The Applicant shall obtain a permit from the U.S. Army Corps of Engineers prior to disturbance of any area in wetlands or provide evidence from the U.S. Army Corps of Engineers that a permit is not required.
24. A Type II Geotechnical Soils Report will be submitted where applicable as required by the Loudoun County Facilities Standards Manual (FSM).
25. At no time shall truck traffic transporting extracted stone products from the Subject Property use or have access to Gant Lane or Route 653. Any extracted stone products from the Subject Property shall be transported off-site via the Goose Creek Bridge approved in SPEX 1990-0019 or, if approved, the Goose Creek inter-quarry tunnel, as proposed in SPEX 2010-0013.
26. No bulk blasting materials shall be stored on the Subject Property.
27. Fugitive dust shall be suppressed by use of water spraying activities. No oil-based products shall be used for suppression of fugitive dust.
28. At the time of issuance of the first zoning permit or grading permit for the quarry use on the Property as approved under SPEX 2009-0027, the Applicant

shall make a one-time contribution of \$12,500.00. Such cash contribution shall be payable to the County, for equal distribution by the County to the primary volunteer fire and rescue companies providing service to the Property. Such contribution shall escalate on an annual basis with a base year of 2010 and changing effective each January 1 thereafter based on the CPI-V prepared by the Department of Labor, Bureau of Labor Statistics and shall be divided equally between the primary servicing fire and rescue companies.

The intent of these provisions is to support a volunteer fire and/or rescue system so long as it is the primary provider of fire and/or rescue services to the Property. Notwithstanding the above, if at such time as the Zoning Permit or Grading Permit is issued, the primary fire and/or rescue service to the Property is no longer provided by an incorporated volunteer company(s), the contributions listed above shall be discontinued. If only one of these services is no longer provided by a volunteer company, the contribution will be reduced by 50 percent and such contribution shall be provided to the remaining volunteer company.

29. Unless otherwise fulfilled by development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006, the Applicant shall record background static water level measurements in all geotechnical borings and observation wells, on a monthly basis for a minimum period of one (1) year prior to active quarrying. This also includes water level measurements at one (1) surface water gauge upstream and downstream in Sycolin Creek from the proposed quarry site. These readings shall be reported to the Department of Building and Development each month during the one (1) year prior to active quarrying and for the duration of quarry activities. The Applicant shall identify surface water gauges on the site plan and/or grading plan.
30. Unless otherwise fulfilled by development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006, the Applicant shall determine background static water levels by averaging the static water level readings taken from all geotechnical borings and monitoring wells during the one (1) year period prior to active quarrying at this site.
31. During the time of active quarrying, the Applicant shall quarterly measure the groundwater levels and sample for quality, in accordance with Virginia State Water Control Board guidelines, at each gauge and in each monitoring well. These measurements shall be reported to the Loudoun County Department of Building and Development as requested by the Department of Building and Development staff.
32. Unless otherwise fulfilled by development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006, the Applicant shall properly investigate any claim of damage to the three (3) adjoining domestic wells across Sycolin Creek and will coordinate its investigation with the Department of Building and

Development staff in determining whether the Applicant's operation caused problems. If the Applicant is responsible, the Applicant shall promptly remedy the problem by methods such as deepening the well, lowering the pump, installing a new well, or installing a new pump, as may be required and most cost efficient, at its cost. If the problem resulted from ordinary wear-and-tear unrelated to the applicant's operations, then the applicant shall advise the Department of Building and Development of such findings.

33. The Applicant shall obtain a Virginia Pollution Discharge Elimination System (VPDES) permit (issued by the Virginia Department of Environmental Quality) to allow for discharge of water back into Sycolin Creek.
34. Unless otherwise fulfilled by development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006, the Applicant shall, for a period of one (1) year prior to active quarrying, collect water samples from Sycolin Creek for determining base levels of water quality. The Applicant shall ensure that the analysis of these samples is conducted in accordance with the Virginia State Water Control Board guidelines. The results shall be provided to the Department of Building and Development each month.
35. During active quarrying, the Applicant shall collect surface water samples from Sycolin Creek above any discharge point and from the discharge outfall on a monthly basis to ensure that water quality is protected. The Applicant shall ensure that the analysis of these samples is conducted in accordance with the Virginia State Water Control Board guidelines. The results shall be provided to the Department of Building and Development each month.
36. The Applicant shall acquire all federal, State, and/or County permits as necessary. The permits shall, among others, include a permit from the Virginia State Water Control Board. This information shall be submitted to the Department of Building and Development upon receipt by the Applicant. No stone extraction activities shall be conducted on the Subject Property unless and until all appropriate permits have been issued by the Department of Environmental Quality, and the DMME.
37. Unless otherwise fulfilled by development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006, the Applicant shall, for a period of one (1) year prior to active quarrying, prior to approval of the first site plan and or grading plan for stone quarrying uses, prepare a contingency plan for surface water seepage from Goose and Sycolin Creeks for the quarry area. This plan shall, at a minimum, contain:
 - (1) Specific information regarding the various possible scenarios of surface water seepage, including steps to be taken during initial response, assessment, and mitigation/control of situation. The plan shall identify firm(s) that are qualified to successfully conduct the

various proposed mitigation activities (e.g., fracture grouting and stream bed modifications). The plan shall include approximate time line goals for each of the two (2) critical pathways (i.e., rapid diversion and slow seepage) (e.g., how long to define an event, how long to alert the response team and notify the appropriate agencies/individuals, how long to develop and initiate the mitigation plan).

- (2) A statement that a portion of the water pumped out of the quarry would be discharged back into Sycolin Creek under a VPDES Permit for that stream (VPDES Permit for Sycolin Creek required by Condition #25).
- (3) Identification of and contact information on the various groups of downstream users of Goose and Sycolin Creeks who would be adversely affected by reduced volume of water flow in the streams or complete loss of water flow due to seepage into the quarry pit.
- (4) Contact information on various emergency response and regulatory agencies, including the names of individuals and firms who would respond to a rapid diversion scenario.

This contingency plan shall be prepared by a Virginia Certified Professional Geologist and shall be submitted to the Director of Building and Development for review and approval. This contingency plan shall be updated with current contact information every five (5) years until quarry operations cease.

38. Prior to approval of the first site plan for stone extraction on the subject property, the applicant shall submit for an approval by the Director of the Building and Development (Director), a detailed hydrogeologic report in accordance with Section 6.230 of the Loudoun County Facility Standards Manual (FSM) and this Condition, to determine the hydrogeologic characteristics of the subject property and whether the proposed stone extraction poses any adverse impacts to Groundwater in the vicinity. The detailed hydrogeologic report will include a Groundwater Monitoring Program Proposal. The monitoring program will be developed to include gauging and quality assessment of specific wells that will be recommended for use within the monitoring program. Recently initiated surface water monitoring within Sycolin Creek, which has been performed in accordance with the SPEX 1999-0006 conditions of approval, should provide useful monitoring data to evaluate surface water conditions near the site. The Special Exception shall be contingent on the data meeting the evaluation criteria detailed in this condition.

Pumping and Observation Well Installation

Six (6) test pumping well sites shall be located within the planned pit boundary, as shown on the Special Exception Plat. Six test pumping wells shall be completed at the proposed locations shown as TW-A, TW-B, TW-C, TW-D, TW-E, and TW-F on the Special Exception Plat. Groundwater observation wells shall consist of twelve proposed wells identified as MW-G, MW-H, MW-I, MW-J, MW-K, MW-L, MW-M, MW-N, MW-O, TW-4 and MW-4 on the Special Exception Plat. Two existing wells identified as TW-4 and MW-4, located to the adjacent northern property will be used as observation wells. For the purposes of this Condition, observation wells are defined as monitoring wells installed to a depth of at least the base of the planned quarry pit, but not below the base of the diabase rock. Prior to construction of the wells, the exact sites will be staked in the field at locations mutually agreeable to County Staff and the Applicant. Locations and top of casing elevations for all wells will be surveyed prior to the start of the test.

The six (6) test pumping wells shall be drilled into the diabase rock to depths at least 30 feet below the elevation of the deepest planned excavation of the quarry pit, but no deeper than the lower limit of the diabase rock. The test pumping wells shall have minimum 8-inch diameter steel casings and the observation wells shall have a minimum of 4-inch diameter casings (Steel or PVC). The test pumping boreholes shall be a minimum of 6 ½ inches in diameter.

Pumping Test Procedure

The groundwater pumping test shall be completed in accordance with Section 6.230 of the FSM using the six (6) test pumping wells pumping in a manner to maintain a constant drawdown for a duration of not less than 48 hours. The pumping water level in each pumping well will be maintained at or below the elevation of the deepest planned extent of the quarry pit, but not lower than 30 feet above the bottom of the well within the first 12 hours of pumping. A down-well "subguard mechanical device" may be utilized to maintain the water levels during pumping. Discharge water from the pumping wells will be routed at least 200 feet from the pumping well to avoid infiltration. This testing procedure is consistent with previously performed aquifer testing associated with SPEX 1999-0006, conducted on adjacent property to the north.

The six pumping wells will be pumped simultaneously with the exception of being started one at a time with a one-hour interval between each start. Pumping in each well will be continuous for not less than 48 hours. When the pumping test is complete, the six pumping wells will be simultaneously shut down. If a pump fails during the test every effort will be made to return the well to operation as quickly as possible. If feasible, the test may be extended for the amount of time that the pump was inoperable.

The monitoring wells shall be measured 48 hours prior to pumping to establish background water levels. During the pumping and recovery phases of the test, groundwater levels shall be measured in the monitoring wells and, to the extent possible in the pumping wells, at approximately the intervals indicated in the ASTM guidelines. Groundwater levels in the monitoring wells shall be measured until one week after pumping stops or until groundwater levels recover to approximately 90 percent of their pumping test level, whichever occurs first.

A rain gauge shall be installed on the subject property for the pumping test. The gauge will be checked daily and the daily amount of rainfall recorded from one week prior to the start of the pumping test until one week following the end of the pumping test or until all water level monitoring for the pumping test is complete, whichever is less.

Evaluation Criteria

Provided the hydrogeologic testing program is conducted in accordance with Section 6.623 of the FSM and the details specified in this document, the results of the test will be evaluated for acceptance.

39. If the Applicant suffers a revocation of any State Environmental Permit Limitation, the Applicant shall be deemed to be in violation of this Special Exception.
40. Pursuant to Section 6-1313 (A) of the Zoning Ordinance, this Special Exception shall remain valid for a period of the period of validity in which the approved Special Exception use and/or related infrastructure must commence shall be 40 years from the date of approval. Except as modified by this change in time period, all other provisions of Section 6-1313 (A) of the Zoning Ordinance shall continue to apply as provided therein.
41. All on-site lighting shall be designed to reduce glare and light spillage onto adjacent roadways and properties not owned by the Applicant and shall not impact the celestial observation of the night sky. All lighting fixtures shall be installed with fully shielded cut-off fixtures so the light is directed downward and inward toward the interior of the Property. For all lighting fixtures placed on building exteriors, including security lighting, there shall be a maximum average illumination over the exterior of the building of 5 foot candles. For all other on-site lighting fixtures, there shall be a maximum average illumination of 2 foot candles.
42. In addition to the minimum requirements for erosion and sediment control in Chapter 1220 of the Codified Ordinances of Loudoun County and the Virginia Erosion and Sediment Control Handbook, the Applicant shall provide the following heightened erosion and sediment control measures specified in the Facilities Standards Manual for Reservoir Protection Requirements, namely:

- a. Super silt fence shall be substituted for silt fence in all perimeter locations; and
 - b. The use of stabilization matting shall be expanded to aid in the establishment of vegetation.
43. If any wood turtles are found during quarry development, the Applicant shall notify all contractors working on the Subject Property about the potential to encounter wood turtles and to undertake a "sweep" of potential habitat areas prior to initiation of construction. The Applicant will also distribute a flyer prepared by the Virginia Department of Game and Inland Fisheries that includes photos and a description of wood turtles that is distributed to all site workers. Any wood turtles located during such a sweep will be relocated to a suitable area along Sycolin Creek or Goose Creek. Additionally, Luck Stone will comply with all federal, state, and local laws governing endangered species. Upon determination by the appropriate federal or state authority that rare species/communities exist, Luck Stone will evaluate the portion of the site not impacted by mining as a possible mitigation area prior to disturbance.

SUGGESTED SPECIAL EXCEPTION CONDITIONS OF APPROVAL

SPEX 2010-0013

LUCK STONE CORPORATION

August 27, 2010

NOTE: It is the intent of the Applicant to revise conditions 15 through 19 approved pursuant to SPEX 1990-0019 (hereinafter, "1990 SPEX Bridge Conditions") and as illustrated on the approved Special Exception Development Plan dated April 4, 1990, and prepared by Dewberry & Davis to permit an inter-quarry tunnel, rather than a conveyor/bridge, to serve the planned quarry extension on the west side of the Goose Creek as shown on the proposed Special Exception Plat. Upon the issuance of a zoning permit and the opening of the proposed inter-quarry tunnel, the 1990 SPEX Bridge Conditions shall be deleted and replaced by those conditions contained herein.

All other prior special exception conditions approved by the Board of Supervisors within Special Exception 1999-0006, Special Exception 1990-0019, and Special Exception 2009-0027 will be maintained. Where there are conflicts between the prior Quarry D special exception conditions and the conditions approved with Special Exception 2010-0013, the most recent in time shall govern.

1. The uses allowed on the Subject Property shall be conducted in substantial conformance with the Special Exception Plat, prepared by Dewberry dated May 5, 2010 as revised through August 26, 2010 (hereinafter referred to as "the Plat"). Substantial conformity shall include minor modifications to the quarry and related uses pursuant to good engineering practices and environmental conditions.
2. Approval of SPEX 2010-0013 and imposition of these development conditions shall neither invalidate the approval granted in SPEX 1990-0019 or SPEX 1999-0006 nor replace the development conditions imposed in SPEX 1990-0019 or SPEX 1999-0006, both of which shall remain valid after the County approval of SPEX 2010-0013.
3. If the Applicant suffers a revocation of any State Environmental Permit Limitation, the Applicant shall be deemed to be in violation of this Special Exception.
4. No bulk blasting materials shall be stored on the Subject Property.
5. Fugitive dust shall be suppressed by use of water spraying activities. No oil-based products shall be used for suppression of fugitive dust.

6. The Applicant shall comply with the stone quarrying extraction and mining standards as contained in Section 5-1506 of the Revised 1993 Loudoun County Zoning Ordinance ("Zoning Ordinance").
7. The two proposed tunnel entrances will be located between 300 and 400 feet on both sides of the Goose Creek (outside of the 300 foot conservation easement) only within areas previously approved for mineral extraction activities.
8. No clearing or grading associated with the proposed inter-quarry tunnel or approach roads shall be allowed within the minimum 300-foot setback along the Goose Creek.
9. Any rock or material excavated on MCPI #151-37-7403 during the construction of the tunnel will be stored on the same parcel until such time as the tunnel is completed. Following opening of the tunnel, any rock recovered west of Goose Creek will be transported to the main plant through the tunnel.
10. Tunnel blasting operations will be limited to Mondays through Fridays between the hours of 8:00 a.m. and 5:00 p.m., except in the case when a blasting charge has been set before 5:00 p.m. and is then delayed. In such a case, the Applicant may then complete the blast after 5:00 p.m., but no later than 30 minutes after sunset.
11. All disturbance activities will avoid designated wetland and steep slope areas.
12. The Applicant will utilize the proposed tunnel for conveying rock and transporting equipment vehicles which are necessary to maintain, manage, and service the proposed quarry. Access to the Luck Stone properties for quarry trucks will continue to be provided via Belmont Ridge Road (Route 659).
13. Luck Stone will utilize an existing farm lane and bridge on MCPI #151-16-0598 to locate necessary construction vehicles its properties west of Goose Creek and begin the tunnel excavation process. No transportation of quarried rock will occur through the farm lane or bridge. The precise location of the farm lane may change within the area of special exception to avoid existing environmental features such as existing trees, swales, and floodplain areas.
14. If any wood turtles are found during quarry development, the Applicant shall notify all contractors working on the Subject Property about the potential to encounter wood turtles and to undertake a "sweep" of potential habitat areas prior to initiation of construction. The Applicant will also distribute a flyer prepared by the Virginia Department of Game and Inland Fisheries that includes photos and a description of wood turtles that is distributed to all site workers. Any wood turtles located during such a sweep will be relocated to a suitable area along Sycolin Creek or Goose Creek. Additionally, Luck Stone

will comply with all federal, state, and local laws governing endangered species. Upon determination by the appropriate federal or state authority that rare species/communities exist, Luck Stone will evaluate the portion of the site not impacted by mining as a possible mitigation area prior to disturbance.

15. Groundwater within the tunnel will be continually monitored by measuring channeled water towards trenches at either side of the tunnel excavation. At regular intervals, sump pumps will be installed to transport the water to a discharge pipe equipped with a flow meter to measure water infiltration, which will provide an accurate measurement of the tunnel's impact on Goose Creek.

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**CONCEPTUAL DESCRIPTION OF PROPOSED OPERATION
&
EVALUATION OF FEASIBILITY OF OPERATIONS WITHOUT HAZARDS OR
DAMAGE TO OTHER PROPERTIES**

SPEX 2009-0027

Luck Stone Corporation

**Special Exception Application For Stone Quarrying Uses
Luck Stone Quarry Extension**

Loudoun County Tax Parcels ##61-10 (MCPI #152-36-1675), A Portion Of 61-9 (MCPI #152-25-5356), 61-6 (MCPI # 151-37-7403), 61-9A (MCPI #152-26-8334), Portion of 61-8 (MCPI #151-16-0598), And A Portion of 61-15, (MCPI #153-35-5865 And As Referenced In ZMAP 2009-0003 & ZMAP 2009-0004); ±321.12 acres

August 27, 2010

In accordance with Section 3-1008(D) and (F) of the Revised 1993 Loudoun County Zoning Ordinance, this document provides a conceptual description of the proposed quarrying operation and a summarization demonstrating the feasibility of the operation without hazards or damage to other properties. As stated above, Luck Stone Corporation proposes to expand its mineral reserves at its Leesburg Plant by mining diabase rock within the proposed area for quarry pit expansion as shown on the Special Exception Plat. The proposed quarry pit area for the Subject Properties is approximately The proposed quarry pit area for the Subject Properties under this application is approximately 148.6 acres and, following approval of ZMAP 2009-0003, ZMAP 2009-0004, and SPEX 2009-0027, there will be a consolidated permitted quarry area (which includes the approved "Quarry D" to the north of the Subject Properties) of approximately 257.1 acres as shown on the Special Exception Plat.

It is anticipated that quarry development will progress from north to south and Luck Stone will remove diabase reserves on the Subject Properties through conventional open pit mining techniques. Mining activities on the Subject Properties will also include the removal of overburden, construction of berms, and creation of an approximately 50-acre overburden placement area in the southwestern portion of the Subject Properties. Additionally, overburden placement may also occur within the proposed Quarry D ultimate pit area as noted on the Special Exception Plat. Removal of overburden is required to expose the Subject Properties' subsurface rock, and any recoverable topsoil will be removed separately for use in the later reclamation process. As overburden is removed it will be progressively used to create berms as well as be placed in the overburden placement area.

The construction of earthen berm slopes will be performed in a manner that limits erosion and sediment laden storm water runoff. Earthen berms will be constructed to a 2:1 slope, or less, ratio. If the berm heights exceed 30 feet, a 20 foot wide bench will be constructed prior to

continuing the 2:1, or less, slope ratio. Storm water will be conveyed from bench to bench via slope drains and/or rip rap flumes that discharge into sediment basins. Storm water basins will be sized according to Virginia Department of Mines, Minerals, and Energy ("DMME") regulation for disturbed acreage. The slopes of the berms will be vegetated to prevent erosion and to limit sediments within stormwater runoff. Application rates for typical seed/fertilizer mixtures consist of: KY 31 Tall Fescue (75 lbs/acre), Weeping Lovegrass (7 lbs/acre), Annual Rye (10 lbs/acre), Korean Lespedeza (15 lbs/acre) German Millet (10 lbs/acre), Bristly Locust ¼ lbs/acre, legume inoculants (2 bags/acre), 10-10-10 fertilizer (1000 lbs/acre), lime 2,000 lbs/acre, mulch (1,500 lbs/acre). Earthen berms are typically constructed with a minimum 100 feet buffer from surface water features. No berms will be constructed within 25 feet of property lines.

Because the rock deposit on the Subject Properties is deeper than can safely be worked as one quarry face, so-called quarry "safety benches" will be established similar to Luck Stone's existing quarrying activities. Generally speaking, the overall slope of the quarry on the Subject Properties will therefore have a stepped appearance. Mining activities will also include blasting, loading of shot-rock into haul trucks, and transporting shot-rock to processing facilities located on the adjacent property to the north and at the existing Leesburg Plant. Drilling and blasting are required to break the rock to a manageable size for primary crushing and screening.

Blasting will be performed by licensed and qualified Luck Stone personnel on a periodic basis with sophisticated techniques in accordance with Sections 5-1505 of the Zoning Ordinance. There will be no bulk blasting agents stored on the Subject Properties, and while no processing, including crushing, screening, or conveying will occur on the Subject Properties during initial commencement of mining activities, such material processing and storage activities may be located on a portion of the Subject Properties later. Any petroleum storage tanks that may be installed will have secondary containment, emergency venting, and any other necessary features to meet or exceed U.S. Environmental Protection Agency ("EPA"), Virginia Department of Environmental Quality ("DEQ"), the County, or other applicable regulatory guidelines. In addition to regulation under the Loudoun County FSM by the Department of Building and Development, the quarry use and all erosion and sediment control activity shall also be regulated by DMME pursuant to standard quarry permitting process. For further information of hydrogeologic controls associated with the proposed quarrying uses, please see the Preliminary Hydrogeologic Report, prepared by Analytical Services, Incorporated and filed with this application.

Quarrying activity will be conducted in a manner that is designed to avoid any impact to offsite properties or surface water bodies. Storm water from the majority of the active quarry pit area will drain into the extraction pit where it will accumulate within a basin in the base of the pit. This process promotes settling of any sediment within the storm water. Water from the pit will be utilized for dust control and also for stone washing operations. Excess water from the pit will be discharged at a DEQ permitted outfall. Storm water sampling and monitoring will be performed at the outfall location in compliance with DEQ permit requirements.

Monitoring of both surface water and groundwater will be performed to evaluate trends in water quality and seasonal fluctuations in groundwater elevation, and this will be addressed in a proposed Detailed Monitoring Plan that will be submitted to Loudoun County Building and Development Staff at a later date. The Detailed Monitoring Plan will include recommendations for groundwater and surface water monitoring locations, monitoring parameters, report formats and a schedule for report submittals. The Detailed Monitoring Plan will include a recommendation for monitoring to be initiated one year prior to the start-up of any ground disturbance associated with the quarry activity. This initial monitoring will enable an assessment of background conditions prior to the start of any mining activity. Long-term monitoring of the Subject Properties, as described within the Detailed Monitoring Plan, will enable an assessment of offsite impact, should any occur, as a result of quarry activity on the Subject Properties. Monitoring reports will be submitted to the Office of Building and Development on a planned monthly basis during the first year. Specific monitoring intervals along with proposed monitoring points will be provided within a proposed Monitoring Plan which will be presented as an Appendix within the Detailed Hydrogeologic Report.

In addition to long term groundwater monitoring, a seismic monitoring program will also be established. Seismic monitoring will be conducted in accordance with DMME monitoring criteria. The scope of the monitoring program will be designed to measure blasting vibrations and to aid in assuring that any blasting vibrations that leave the Subject Properties are well within the guidelines established by Loudoun County and DMME. The Detailed Monitoring Plan will also include a mitigation plan to address offsite impacts deemed to have occurred as a result of the quarry operation

Prior to any land-disturbing activities, the applicant shall have an engineered sediment and erosion control plan approved by the DMME. The quarry use and all erosion and sediment control activity shall be regulated by DMME pursuant to DMME's standard quarry permitting process.

RECLAMATION PLAN

SPEX 2009-0027

Luck Stone Corporation

**Special Exception Application For Stone Quarrying Uses
Luck Stone Quarry Extension**

Loudoun County Tax Parcels ##61-10 (MCPI #152-36-1675), A Portion Of 61-9 (MCPI #152-25-5356), 61-6 (MCPI # 151-37-7403), 61-9A (MCPI #152-26-8334), Portion of 61-8 (MCPI #151-16-0598), And A Portion of 61-15, (MCPI #153-35-5865 And As Referenced In ZMAP 2009-0003 & ZMAP 2009-0004); ±321.12 acres

August 27, 2010

In accordance with Section 3-1008(G) of the Revised 1993 Loudoun County Zoning Ordinance and in conjunction with the Special Exception Plat set submitted with this application prepared by Dewberry & Davis, LLC, this document presents a summary plan for reclamation of the Subject Properties. Following cessation of all mining activity on the Subject Properties, restoration of the quarry pit and final reclamation activities will be conducted in accordance with Virginia Department of Mines, Minerals, & Energy regulations. All metal, concrete, and lumber debris will be removed from the site, and all buildings, structures, petroleum storage tanks and other artifacts of industrial activity will be removed unless they will support a planned future use. Gravel haul roads will be scarified, top-dressed with topsoil, limed, fertilized, and seeded so as to remove traces of any former industrial uses.

Once activity on overburden areas has ceased, the overburden placement areas outside of established water line easements will be stabilized and seeded with grasses, planted with trees and reforested. Additionally, once quarrying activity has ceased, the gravel operations roads outside of established waterline easements will be scarified, top-dressed with topsoil, limed, fertilized, and seeded so as to remove traces of any former industrial uses. The entire Subject Property is currently envisioned to be permanently preserved either as private or public open space uses as forest and a body of water/water impoundment/water storage.

Given the size of the proposed quarry and the lengthy timeframe between commencement and cessation of mining activity, it is difficult to identify a specific viable end-use for the Subject Properties. While such potential uses include, but are not limited to, active or passive outdoor recreation, open space or nature conservancy uses, etc., it is probable that the quarry pit will be used for purposes of water impoundment, perhaps as an environmentally-sustainable water resource for Loudoun County residents, such as a recreational lake or potentially as a public water reservoir in conjunction with Loudoun Water's Central Water Supply Program. Other potential uses for the surrounding land include, but are not limited to, active or passive outdoor recreation, picnic areas, open space or nature conservancy uses, etc. Any future use of the land

surrounding the water impoundments will be compatible with the water resource reservoir and the local land use requirements of Loudoun County.

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